RELATIONSHIP AMONG MEASURES OF PERCEPTUAL RIGIDITY AND ASPECTS OF RELIGION

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CHAPTER I

THE PROBLEM: ITS NATURE AND IMPORTANCE

The purpose of the following study was to compare a group of college students in attendance at a religiously conservative institution with a group of college students at a state college to determine what differences exist between the two groups in selected measures of perception and attitude. The study had a further purpose of determining what differences existed between a measure of certain religious values and selected measures of perception.

There is little evidence to be found in psychological literature regarding such a religiously conservative group of college students on measures of perception and religious attitudes. A body of research information exists concerning such a group and measures of prejudice, authoritarianism, dogmatism, and other related attitudes; but research is scant when the area of perception is scrutinized. Little is known regarding the effect of religious experience and background upon personality characteristics other than the authoritarian syndrome. Even less is known regarding the effect of religious conservatism upon various aspects of personality.

The dearth of research and understanding of the area of religious experience was lamented by the late Gordon Allport (1953) when he wrote the opening remarks for The Individual and His Religion:

> Among modern intellectuals--especially in the universities--the subject of religion seems to have gone into hiding. Whatever the reason may be, the persistence of religion in the modern world appears as an embarrassment to the scholars of today. Even psychologists, to whom presumably nothing of human concern is alien, are likely to retire into themselves when the subject is broached (p. 1).

In a review of the psychology of religion over the last fifty years Page (1951) commented thus:

> The psychological investigation of religion, in America about 1900 with Starbuck's studies of conversion and James' famous classic, ran a fairly lively course of productive activity during the first quarter of a century. But since then, interest and output have steadily declined until today it would not, perhaps, be untrue to say that the subject is regarded by many psychologists with almost complete indifference and by some with positive suspicion and even disfavor. Thus, one studies tribal ceremonies of primitive cultures, religious delusions of psychotics, conversation experiences of adolescents, but not the religious behavior of normal adults of our own culture (p. 60).

Jung, with his analytical and often mystical approach, is one of the few more recent writers who did not exhibit a reluctance to inquire into religious experience, but rather saw such investigations as psychologically relevant and germane. Jung (1938) states,

> Since religion is incontestably one of the earliest and most universal activities of the human mind, it is self-evident that any kind of psychology which touches upon the psychological structure of human personality cannot avoid at least observing the fact that religion is not only a sociological or historical phenomenon, but also something of considerable personal concern to a great number of individuals (p. 1).

A review of psychological abstracts over the last 25 years shows an average of about six studies per year regarding religion or religious values, and of these studies only about 12 were of an empirical nature. The latest Mental Measurements Yearbook (Buros, 1965) has only eight tests subsumed under the rubric of religion. Most of these tests are concerned with parochial school achievement in the subject of religion.

The above indicates something of the present state of empiricism as touching religious experience. The need for enlarged and continuous research seems patently clear. The psychological literature regarding religion is not extensive; that regarding religious conservatives is somewhat scantier; and that regarding religious factors related to perception is virtually lacking.

The interest on the part of this investigator was not based upon the paucity of literature alone. Considerable motivation has stemmed from several preliminary, attitudinal and projective assessments conducted by the writer using Evangel College students as subjects. Evangel College is a religiously conservative, liberal arts college located in southwest Missouri. The three measures employed were the Edwards Personal Preference Schedule, the Minnesota Teacher Attitude Inventory, and Boring's Ambiguous Face. These exploratory studies gave partial support to the notion that differences may exist among religiously conservative college students when compared to other college students.

The Edwards Personal Preference Schedule was used in several Educational Psychology classes composed of 150 sophomore and junior students. This test is designed to measure 15 diverse, manifest needs. The purpose of the study was to observe whether differences would occur between the Evangel College students and the appropriate college norms. The heterosexuality scale scores on this test were low and the abasement scale scores were high, suggesting that some differences of attitudes or manifest needs may exist. The same group of subjects was given the Minnesota Teacher Attitude Inventory, purporting to measure wholesome attitudes toward teaching, as part of an attempt to help the student better understand himself in relation to the profession of education. The collective result, using the appropriate norms for each student, was a low mean rank at the tenth percentile for the entire group on national norms, indicating undesirable attitudes toward both children and teaching. The results of the Edwards abasement scale and the dominance evident on the Minnesota Teacher Attitude Inventory appear, at first glance, contradictory. The results fit quite well, however, into the authoritarian personality syndrome. In this pattern the authoritarian is dominant toward subordinates while subservient toward those in authority. The authoritarian pattern of dominance toward subordinates may be represented by dominance toward children as measured by the Minnesota Teacher Attitude Inventory.

One of the measures which created much of the initial interest for the present study concerned the Boring Ambiguous Face. This ambiguous face, designed to measure perceptual differences and which may be seen as an old woman and also as a young woman, was presented to approximately 300 Evangel College students. Almost 90% of these students saw the old woman. Many of these students had great difficulty in seeing the other possible percept, even when helped to do so. The original study by Leeper (1935) at the University of Arkansas found only 35% of his subjects had formed the old woman percept.

This observation of a difference stimulated the investigator to become deeply interested in possible perceptual differences among this group of college students. The devices used in making observations regarding such a group of college students were slowly expanded. The writer observed what were believed to be differences while using the Structured-Objective Rorschach Test with several classes in Tests and Measurements. Many students, when compared to norms for college men and women in the S-O Rorschach Test manual, were very high in form-dominated percepts; many reached the amount of form dominance which is construed as pathological constriction or rigidity. These several observations led eventually to the present study.

Review of the Literature

This brief survey of the literature discusses theoretical positions and relevant research concerning the effect of religious experience with special attention given to religious conservatism and extrinsic religious values. Numerous studies have found such dimensions as authoritarianism, dogmatism, prejudice, and attitudinal rigidity related to religious values. Since this study was also concerned with measures of perceptual rigidity and their relationship to conservative and extrinsic values, some studies related to perceptual rigidity and measures of perceptual rigidity are cited.

Religious Values

Most of the empirical studies bearing upon various correlates with religious values have been done in the last two decades. The very early psychological inquiries about religious values lacked in empirical rigor and were largely speculative and philosophical in nature. There were some interesting sociological studies done just before and after World War II. Many of the studies reviewed here were an outgrowth of the well known work *The Authoritarian Personality* (Adorno, Frenkel-Brunswik, Levinson, and Sanford, 1950). After this initial work by Adorno and colleagues, a spate of research appeared which pursued the relationships of the authoritarian personality and prejudice with other psychological variables. Some of these studies touched upon religious values.

The original Adorno study (1950) noted a relationship between religious values and the authoritarian personality and also religious values and prejudice. Other studies soon corroborated these findings. Groups of Catholic, Protestant, and Jewish college freshmen were compared by Spoerl (1951) to determine whether one group was more prejudiced than another. The Bogardus Social Distance Scale was used as a measure of prejudice. While educational level seemed to lessen the amount of prejudice in all of these groups, the Catholics appeared the most prejudiced and the Jewish least prejudiced. In another study (LoScuito and Hartley, 1963) Jewish and Catholic subjects were tested to determine whether religious affiliation, dogmatism, and performance on a special stereoscopic task were related. The stereoscopic task involved seeing both Catholic and Jewish symbols concurrently. The ability to see one's own religious symbols while ruling out other religious symbols correlated strongly with dogmatism. The Catholic and Jewish faiths, however, were not alone in these relationships. Lester Lee (1963) was interested in testing Fromm's concept and analysis of authoritarianism in reformation theology. Lee designed a special scale to measure theological agreement with Luther and Calvin. Subjects were drawn from a large Presbyterian church and a seminary. The scale of theological items correlated .59 with the Dogmatism Scale, and the study supported Fromm's idea concerning authoritarianism. Thus, several investigators found relationships among different religious orientations, prejudice, and authoritarianism.

Conservative religious values. Psychological literature is replete with studies regarding the authoritarian personality. Some of these studies implicate religious values and religious conservatives as being correlated with facets of the authoritarian personality. The religious conservatives have attracted the attention of researchers quite out of proportion to their numerical importance on the religious scene. It is apparent that the conservatives' certainty of belief, active promulgation of their beliefs, and acquiescence to the proper authorities appear much like the stereotype of the authoritarian personality. Perhaps it is this striking similarity that has prompted such extensive investigation.

The familiar ethnocentrism (E) and fascism (F) scales were used by M. Jones (1958) and compared to the Study of Values and other measures of religiosity to determine whether religious values were associated with prejudice. There was a marked tendency for the subjects who were authoritarian to report a religious background and to adopt religious values. Apparently, the stronger the religious beliefs the more rigid the person is likely to appear. This same type of result was achieved in another study (Turner, 1964) using adult volunteers from five Protestant churches. A new scale, The Religious Beliefs Inventory, was used along with the Minnesota Multiphasic Personality Inventory and the Interpersonal Check List. In Turner's dissertation study, certainty of belief was related to a less differentiated view of one's self, one's parents, and to defensive repression. The more certain the subject was of religious beliefs, the more restricted the subject appeared.

A definite association of fundamentalism to dogmatism and authoritarianism was found by Stanley (1963 A). Stanley states, "The picture of the fundamentalist theological student suggested by the data is similar to Rokeach's analysis of the 'closed mind.' Indeed, fundamentalism may be the religious manifestation of this general personality characteristic (p. 123)." In another similar study by the same author (Stanley, 1963 B), a similar relationship of dogmatism was found with a group of fundamentalist university students. In both of these studies religiously conservative students were tested, using measures of neuroticism, dogmatism, and authoritarianism. Gregory (1957), in a separate study attempting to determine if religious orthodoxy and the authoritarian personality were related, came to the same conclusion as Stanley. High scorers on the

Chave: Attitude Toward Church Scale, according to Gregory, tended to be literalistic, concrete, and even materialistic in their religious orientation. The greater the orthodoxy, the greater the amount of authoritarianism was found.

Several researchers have attempted to determine what psychological characteristics surround religious conservatives. R. R. Lee (1965) in a dissertation found fundamentalism and Puritanism as leaning toward rigid defenses.

Dreger (1958) used a battery of projective devices upon a group of religious liberals and a group of religious conservatives. Greater dependency feelings were observed among the religious conservatives.

The study which probably comes the closest to the present research was that of W. Wood (1962), who used a group of Pentecostal Holiness subjects, a group quite similar to the Assemblies of God members used in this present study. The Rorschach was employed by Wood to determine whether these religious subjects differed in personality from a comparison group on a projective measure. His subjects used more responses involving animal movement than human movement (*FM* > *M*); they were low in certain color responses (*CF*). There was a high number of form-dominated responses (*F* & *F+*). In assessing the results, Wood concluded that the people in his study were troubled by extensive and consuming conflicts, and they were strongly motivated to find personality stability through religious goals. Wood also indicated the possibility of their vulnerability in interpersonal relationships.

It would appear from the foregoing that religious conservatives are heavy with dogmatism or authoritarianism; and this, in turn, is related to prejudice. It is less clear, but probable, that religious conservatives are more dependent and more rigid of defenses than normals. There may be extensive conflicts and vulnerability. Further study seems clearly warranted to clarify and expand our information.

Personality and religious values. Some research effort has been directed toward ascertaining whether certain personality factors and religious values are related. A study was done by Fisher (1964) to test the hypothesis that the more religious individual would be more acquiescent. College students were tested with the Study of Values and the Bass Social Acquiescence Scale, and other measures. Acquiescence was significantly related to religious values.

Several studies have been done by various researchers using the Rosenzweig Picture-Frustration Test.

Several personality styles emerged from these studies as related to particular religious persuasions (Kirschner, McCary, and Moore, 1962). Kirschner compared groups of Jewish, Catholic, and Baptist children.

A study by M. P. Smith (1951) concluded that religious values have a marked effect upon intellectual performance. Smith compared college groups of Lutherans and Catholics who had received strong religious training against a college group of subjects largely without religious training. The measure used was the ACE Psychological Exam, which is a scholastically weighted intelligence test. Smith found that strong religious training affected intellectual performance. The religiously trained subjects were superior on sharply defined, unambiguous tasks; they were inferior on the not clearly defined, ambiguous tasks. When the complexities of the ACE subtests, religious groupings, and variety of religious training possible are considered, this is a remarkable result. Religious training may affect even intellectual functioning.

Of the numerous other studies available which explore some of the possible correlates with religious values, one by Lenski (1953) shows certain demographic variables such as sex, education, occupation, and other differences correlated to religion. However, he points out that religion and religious values are not just correlates with numerous other sociological-psychological variables, but religion is an active, powerful construct. Religious values can and do determine particular behavior by active, conscious choice. One can observe how active such construct-determined behavior is in the experiences of Frankl (1962) and his existential viewpoint. This can also be observed in the tenacious, self- and society-denying stance of religious conservatives; this forceful construction can be witnessed in numerous kinds of religious experience.

Extrinsic religious values. Several studies reported by Allport (Allport and Kramer, 1946) and Lindzey (1950) showed the relationship of religious values and prejudice. Allport, apparently, struggled with the seeming enigma of religious values and prejudice being related; he could not see any necessary, logical reason why religion would dispose people toward prejudice. The diametrically opposed, conflicting values of religion and prejudice led Allport to advance the concept of an intrinsic-extrinsic religious dimension. He concluded that extrinsic religious values accounted for the observed relationship of religion to prejudice. These extrinsic religious values were religious values held for reasons of social conventions, conformity, and approbation rather than their intrinsic worth. It was maintained by Allport (1946) that intrinsic religious values would not be related to prejudice. Argyle (1958) suggested that it was not the genuinely devout person but rather the conventionally religious person who manifested prejudice.

Both Wilson (1960) and Feagin (1964) pursued the investigation begun by Allport and colleagues concerning extrinsic religious values. Each developed a scale to measure the intrinsic-extrinsic religious value dimension. Their studies provided corroboration concerning the utility of the extrinsic religious values concept. As observed earlier, prejudice was related to extrinsic religious values and not to intrinsic religious values.

In the study done by Feagin (1964), factor analytic techniques led to postulating two dimensions instead of Allport's single dimension. Feagin (1964) points out,

> . . . categories into which the answers fell were then observed to lie on two dimensions. The first corresponds to Allport's intrinsic-extrinsic dimension and specifies the role or function of belief, while the second dimension covers institutionalisation and individualism and concerns the manner of accepting beliefs, or the role authority . . . (p. 17).

Feagin also adds a belief-disbelief dimension to his model so that it may be "generalized more widely in order to specify the manner in which belief and disbelief operate (p. 17)."

The intrinsic-extrinsic dimension provides an extremely simple means for categorizing religious sentiment. Several classification systems other than extrinsic religious values have been suggested (Fichter, 1953; Thouless, 1954; Pratt, 1905), but generally they are not easily reducible to objective measurement. This whole problem of measuring the various dimensions of religious sentiment is in initial stages of development. Little research is available other than the original studies determining the relation of extrinsic religious values to prejudice and a factor analysis of Feagin's Intrinsic-Extrinsic Scale.

Perceptual Differences, Rigidity, and Measures of Perceptual Rigidity

One of the major purposes of this study was to determine whether a relationship exists between measures of perceptual rigidity and various religious values. This section reviews some of the problems related to the concept of perceptual rigidity and to several selected measures of perceptual rigidity which were used in this study.

The concept of rigidity possesses many facets which investigation to the present has not made satisfactorily clear. Graziano (1961) reviewed the extant literature regarding rigidity and concluded that the principal areas of concern were rigidity's definition, etiology, and dimensions.

One of the difficulties which plague the concept of rigidity is the diversity of meanings which have been ascribed to it. Forster, Vinacke, and Digman (1955) indicate that under the rubric of rigidity may be the following: perseveration, rigidity of set or einstellung, ethnocentrism, recentering, concrete and abstract, and finally creativity. To this list Graziano (1961) adds proactive inhibition, intolerance of ambiguity, and stimulus-binding. This should suffice to indicate the extent of diverse kinds of behavior which may fall under the concept of rigidity. The definition which emerges throughout the studies regarding authoritarianism was "intolerance of ambiguity (Frenkel-Brunswik, 1949; Adorno _et al_, 1950)." Johnson and Stern (1955) defined rigidity as,

> By perceptual rigidity we mean that the person responds in a relatively restricted or selective manner to environmental cues, as compared to the flexible person who responds in a less restrictive and selective manner to these same cues (p. 311).

Rokeach (1951) defined rigidity as "the inability to restructure a field in which there are alternative solutions to a problem in order to solve that problem more efficiently (p. 83)." This is, of course, a definition which is more amenable to problem-solving investigation.

Graziano (1961) suggested that rigidity was the relative availability of alternative responses. Rigidity, as a term, has been applied to so numerous a variety of areas of behavior from intelligence and problem solving, attitudes and values, to unconscious perceptual activity that such diversity and confusion are readily understandable. Many authors call for some new unifying concept to help alleviate the confusion; but, as yet, none has been advanced.

Another problem of the concept of rigidity concerns the widespread etiology of such behavior. Cattell (1946), in reviewing the riddle of perseveration, observes that there is a hereditary element underlying rigidity. Cattell points to the fact that Mediterraneans were high in rigidity while the Nordics were low. No theory of rigidity that the writer is aware of has been extensive enough to integrate the concept of hereditary interaction.

Considerable attention has been given to the part played by defective ego development with rigidity. Cattell (1946) points out dynamic protection as one of the reasons for rigidity. Such researchers as Postman, Bruner, and McGinnies (1948) generated a whole series of studies about perceptual defense. Running verbal battles appeared in journals arguing the utility of the idea of perceptual defense. While disagreement still persists, the general concept appears to have been accepted. Related to perceptual defense has been the extensive work (Rokeach, 1960) concerning the effect of anxiety upon rigidity. Rogers (1951) indicated theoretically that threat produces a reduced perceptual field; research by Rokeach (1960), Wolpert (1955), and others bears out Rogers' idea. Fisher (1950) indicates that a relationship exists between certain psychological disorders such as conversion hysteria and paranoid schizophrenia and rigidity. Anxiety and threat appear as two of the wellsprings of rigidity; certain psychological disorders are implicated as well.

Both age and sex have some bearing upon rigidity. Kounin (1940, 1943) suggested that the degree of rigidity increases with age, and this increase of rigidity was generally borne out by his research. Korchin and Basowitz (1946) found differences in rigidity due to aging using the Cat-Dog Test. An extensive series of studies by Witkin and his colleagues (1949 A, 1949 B, 1950), investigating numerous perceptual differences, found differences due to both age and sex.

It is apparent, then, that rigidity is not only difficult to define, but it has numerous possible sources, and these sources are diverse indeed. As mentioned before, the problem areas regarding rigidity are definition, etiology, and dimension; attention is now directed to the latter.

Is rigidity a series of discrete, specific instances of rigid behavior, or is it a unitary, pervasive, generalized mode of responding? Research is indecisive on this point. Cattell (1946) maintained that rigidity was a unitary trait which correlated with certain primary source traits. Fisher's monograph on personality rigidity (1950) insisted that while there was no single, successful measure of general rigidity, many individual scores gave moderately good measures of general rigidity trends. He further points out that such measures as are now available give rough group differentiation but are not close enough to be used diagnostically. Adorno _et al_ (1950) and Rokeach (1960) argue for a unitary, pervasive mode of responding based on their research concerning ethnocentrism. Becker (1954), in a study using special lenses and visual awareness of different effects produced by these lenses, found measures of perceptual rigidity on the Rorschach were related to rigidity in perceiving the effect created by the lenses. Becker argued in support of the generality of rigidity.

Other investigators have not shared the opinion that rigidity is a general mode of responding. Schaie (1955) utilized factoral analysis with numerous tasks, such as the Water Jar Test, Capitals Test, and others, and found three types of rigidity. In a study using the same factor analytic techniques as above, Graziano (1961) used six diverse tests upon first and second graders; seven factors emerged. Graziano indicated that rigidity, at least as seen from his study, was a multifactorial, multidimensional, and rather specific response. The age level of Graziano's subjects may have a bearing upon this; older subjects might well have demonstrated generalized rigidity. Wolpert (1955) compared numerous devices used to measure rigidity; most of them possess fairly high reliabilities but low correlations among them. This fact would tend to argue against a generalized rigidity syndrome. Baer (1964) engaged in a similar investigation as Wolpert (1955), using a whole battery of intelligence, rigidity, and various perceptual tasks. The results indicated little or no relationship of perceptual tasks to measured rigidity.

There seems to be no ready solution to the conflicting results reported in the psychological literature. It appears that it is enough of a unitary trait to correlate with certain primary source traits (Cattell, 1946); and while no single rigidity measure has been particularly successful, combinations of these give moderately good measures of general rigidity trends (Fisher, 1950). Such perceptual measures of rigidity will not suffice for diagnostic assessment, but provide adequate measures for rough group differentiation (Fisher, 1950). There is still a need to solve the reported inconsistencies from some integrating concept or new directions. This seems not materially different from the problem encountered regarding whether a general intelligence, specific intelligences, or both exist.

There is extensive literature regarding the instruments used as measures of rigidity and extrinsic religious values in this study. A brief review of such literature is made in the section discussing and describing the instruments used for measurement in Chapter II, Design of the Study.

Summary

The areas of religious values, religious conservatism, and extrinsic religious values were discussed and relevant literature was cited. Religious values and religious conservatism in particular have been found related to ethnocentrism, prejudice, and rigidity. The relationship of religious values to prejudice led

Allport (1946) to postulate an extrinsic religious dimension which was responsible for this relationship. Initial research bore out the extrinsic religious values concept.

Perceptual rigidity and its difficult ramifications were examined. Numerous definitions of rigidity exist, confusing the concept. The etiology of rigidity was seen as very diverse--from age and sex to attitudes. It was observed that research hasn't yet concluded whether rigidity is a rather general personality mode of responding or a specific, discrete instance of responding. It appeared that rigidity was generalized enough, although no single measure was found adequate, that rigidity may be used for group differentiation but not as a diagnostic tool.

The Problem

Rationale of the study

The evidence has been fairly strong concerning the relationship of various religious values, authoritarianism, and dogmatism to measures of rigidity. This study purposed to test whether certain religious values and orientations were related to measures of perceptual rigidity.

Rogers (1951) asserts that threat causes the self-structure to be organized in a more rigid manner while non-threat causes a relaxation of defensive organization and eventually leads to self-actualizing growth, acceptance of one's self, and acceptance of others. Rokeach (1960) in _Open and Closed Mind_ indicates that anxiety causes the personality system to become more rigid. In this study religious conservatives were seen as people under continual threat and anxiety induced by their view of a threatening Deity. Such belief systems have been demonstrated as being stronger and more tenacious than factual systems; thus, such religious threat and anxiety can become very pervasive and strong. Religious values can be a useful motive for improvement; unfortunately, such values can also produce demoralizing fear and anxiety. It must also be stated that this is not a necessary view of Deity for conservatives, but practically speaking it often is. Religious conservatism, then, can create threat which works to close the perceptual system and make perceptions more rigid.

A wide range of perceptual measurements was used since the literature has shown that no one device alone is a good, useful measure of rigidity. It is expected that rigidity will be demonstrated by a kind of perseveration on the Boring Ambiguous Face and the Cat-Dog Test, while rigidity will be demonstrated by form-dominated percepts on the S-O Rorschach Test and the Welsh Figure Preference Test.

Statement of the problem

The purpose of this study was to determine the relationships which exist between (1) four measures of perceptual rigidity and two groups of college students, representing differing religious orientations, (2) four measures of perceptual rigidity and a measure of extrinsic religious values, and (3) a measure of extrinsic religious values and two groups of college students, representing differing religious orientations. One group of college subjects was in attendance at Evangel College, a religiously conservative, denominationally-controlled college; the other group of students was in attendance at a public, state-controlled institution.

Hypotheses

There were three hypotheses necessary to test the relationships among the two groups of college subjects, measures of perceptual rigidity, and a measure of extrinsic religious values. These are given below.

Hypothesis 1. Measures of perceptual rigidity are related to group membership, representing different religious orientations.

Hypothesis 2. Measures of perceptual rigidity are related to a measure of extrinsic religious values.

Hypothesis 3. The measure of extrinsic religious values is related to group membership, representing different religious orientations.

Limitations of the study

This study utilizes one religiously homogeneous and one religiously heterogeneous group of college students. There are, therefore, several obvious limitations. (1) The subjects are college youth. Applicability to greatly younger or older groups of religiously conservative people would be impossible. Age has been indicated as an important variable in perceptual rigidity. (2) The subjects are, for the most part, middle class youth. It would be suspected that perceptual rigidity might be quite different for lower class youth. (3) The subjects are of mental ability admissible to college. It would be suspected that greatly lower mental ability would produce quite different patterns of rigidity and possibly religious values. The level of mental ability has an effect, for example, upon the location and determinant variables on the Rorschach. (4) The subjects are at liberal arts institutions. The results might well be different for theological students attending Bible colleges.

Definition of terms

Extrinsic religious values. Extrinsic religious values are religious values which are held largely for reasons of social convention, social conformity due to pressure, and social enhancement or approbation. It is more an external function. The opposite value, intrinsic religious values, are religious values held for reasons of personal satisfaction and fulfillment, inherent worth or enrichment. His creed is a part of the pattern of his personality; he lives for his religion.

Operationally, extrinsic religious value is defined as the score earned on the Extrinsic Religious Values Scale.

Perceptual rigidity. Perceptual rigidity is used with reference to two specific kinds of rigidity: perseveration and form-dominance. The former refers to an inflexibility of percepts formed or inability to shift percepts readily; the latter refers to percepts dominated by form or shape.

Operationally, the Boring Ambiguous Face and Cat-Dog Test measure the extent of rigidity by the inflexibility of response. The Boring Ambiguous Face indicates rigidity by longer times for forming and re-forming a percept. The Cat-Dog Test indicates rigidity by persistence in maintaining the percept of a cat further into the cat-dog series. The Structured-Objective Rorschach Test and the Welsh Figure Preference Test measure the extent of rigidity by the extent of form-dominated percepts. The Rorschach indicates rigidity by form-dominated determinants (F primarily). The Welsh indicates rigidity by the choice of simple, symmetrical, ruled-line drawings.

CHAPTER II

DESIGN OF THE STUDY

This study was designed to compare two groups of subjects, one group from a religiously conservative college and the other from a state college, to determine what differences, if any, exist between them on measures of perceptual rigidity and extrinsic religious values. This study examined specifically the relationships which existed between: (1) measures of perceptual rigidity and the two different college groups, (2) measures of perceptual rigidity and a measure of extrinsic religious values, and (3) a measure of extrinsic religious values and the two different college groups.

This chapter presents the selection of subjects and the institutions from which they were drawn, the instruments used for measurement, administration and scoring procedures, and the statistical treatments used.

I. The Selected Institutions and Samples

The subjects utilized in this study were drawn from two midwestern college institutions. The colleges were Evangel College and Central Missouri State College. These colleges ostensibly differ as to the amount of religious conservatism extant at each. It is assumed for purposes of this study that Evangel College is a relatively homogeneous, religiously conservative group. Evangel College draws its students almost exclusively from a religiously conservative denomination and uses religious experience and commitment as one of the admissions criteria. It is assumed, further, that Central Missouri State College provides a heterogeneous religious group. As with most public institutions, there is no pattern of selectivity for admissions based upon religious values; nor is a particular religious persuasion the predominant force at such an institution.

The institutions

Evangel College is a small coeducational, liberal arts college located in Springfield, Missouri, operated and controlled by the General Council of the Assemblies of God. It was opened in 1955 and now has just over 900 students enrolled. Evangel College has regional accreditation with the North Central Association of Colleges and Secondary Schools. The college is not an independent, church-related institution which subscribes only casually to the Christian religion or to a Christian denomination. It is rather a church-controlled institution, owned and actively controlled by its parent denomination, and subscribing to the tenets of the parent denomination. The college draws almost all of its student body from its own churches. The aims of the college, as stated in the catalog, reflect this denominational control.

Each student is required by an application for admission blank to respond with data regarding his religious experience, consistency in Christian conduct, and degree of religious commitment. These data are used in determining admittance to Evangel College. Each applicant is required to provide a pastoral recommendation and to sign a pledge which indicates willingness to comply with the code of conduct. The pledge is as follows:

> I am in sympathy with the desire to keep and maintain high Christian standards at Evangel College. While enrolled as a student I will conduct myself honorably at all times. I will abstain from the use of tobacco in any form; will abstain from the use of alcoholic beverages in any form; will not give or receive help on examinations; will not attend public theaters or other questionable places of amusement; will abstain from gambling in any form and the use of playing cards associated with gambling; will abstain from all forms of social dancing; and will practice modesty in dress and speech . . .

The college requires a minimum of eight semester hours of religious subject matter in its curriculum. Attendance at daily chapel is mandatory and attendance at church is expected. It is rather plain that such a denominationally-controlled college would have limited appeal outside the pale of its denomination or certain closely related denominations.

Central Missouri State College is a much larger, coeducational, liberal arts college located in the small town of Warrensburg, Missouri. It was founded before the beginning of this century and has traveled the well known route of normal school, teachers college, and finally state college. Central Missouri State College has over 7,000 students and is regionally accredited. The college is operated by the state of Missouri. Since this college is operated by the state, none of the religious criteria which are important to Evangel College's purposes is used for either admittance or retention of its students.

Throughout the remainder of this study the Evangel College group will be referred to as EC, and Central Missouri State College will be referred to as CMSC.

II. Instruments for Measurement

This section will describe the several devices used for data collection. The first type of instruments discussed are measures of perceptual rigidity; the second type of instrument discussed is a measure of extrinsic religious values.

Measures of perceptual rigidity

There were four instruments used to measure perceptual rigidity. The four devices were selected for use in this study because they were representative measures of different aspects of perceptual rigidity, and they provided varied perceptual tasks to the subjects. The four instruments were: (1) Boring's Ambiguous Face, (2) Cat-Dog Test, (3) Structured-Objective Rorschach Test, and (4) The Welsh Figure Preference Test. Each of these devices will be subsequently described and discussed.

Boring's Ambiguous Face. The ambiguous facial figure originally appeared in Puck, November 1915. The figure was redrawn by an artist for Boring of Harvard University and appeared in The American Journal of Psychology in 1930. Boring briefly presented the figure, indicating its possible usefulness for research. The ambiguous face can be perceived either as an old, haggish looking woman or a young, stylish woman. This ambiguous face was used by Leeper (1935) in a well known study done at the University of Arkansas. Leeper used college students as subjects and his concern was to test certain Gestalt concepts regarding perception and the effect of experience upon perceptual organization of visual stimuli.

The ambiguous face has been used in some of the studies of authoritarianism (Frenkel-Brunswik, 1949). In these later studies, while the concern was still centered about perception, its use was changed considerably. It is currently used principally as a measure of inflexibility. The use of the ambiguous face in this study was as a measure of inflexibility or perseveration. It is impossible to report reliabilities for the ambiguous face; once the picture is seen, a mental set can occur which makes a test-retest situation impossible. There are no studies, known to the writer, reporting the validity of this device. The rather clear rationale provides a kind of content validity which is its justification for use at the present.

Cat-Dog Test. The Cat-Dog Test consists of a series of 13 projection slides which move by small, progressive increments from a cat to a dog. The subjects are not aware that the slides will present small modifications occurring in serial order. Several of the initial and concluding pictures are normally non-conflicting pictures; the pictures in the middle are conflicting pictures due to presenting a likeness of both a cat and a dog. The longer through the series of pictures the subject persists in perceiving the cat percept, the greater the amount of inflexibility or perseveration is assumed to be present.

The Cat-Dog Test was first reported by Frenkel-Brunswik (1949), developed by Krasno and used by Korchin and Basowitz (1956). The test was originally created to test perceptual-cognitive functioning and was used by Korchin and Basowitz (1956) to measure the increasing inflexibility associated with the aging. This device has since been used by several researchers (Baer and Forster, 1964) as a part of a battery of perceptual tasks measuring perseveration. The Cat-Dog Test, as with the preceding Boring Ambiguous Face, cannot be subjected to test-retest reliabilities because of the perceptual nature of the stimuli. The only validity possible is a face content validity.

Structured-Objective Rorschach Test (SORT). The SORT is similar to the standard Rorschach technique since it uses the familiar ten ink blots for its stimuli. The SORT is a radical modification, however, of the traditional Rorschach technique and has a considerable advantage in that it permits group administration and simplicity in scoring of the test. The SORT uses objective type responses rather than completely free, projective responses. The SORT was devised by J. Stone and published by the California Test Bureau (1958). It uses much of the nomenclature found in the traditional technique. It was deemed satisfactory for the limited purpose of group comparisons and used primarily as a visual, perceptual task rather than as a projective device.

The SORT's reliability varies greatly from scale to scale within the test itself. A median reliability value of .75 is indicated in the Preliminary Manual for the 15 SORT variables; a minimum value of .62 is reported, but most of the reliabilities are moderately good (Stone, 1958). The validity of each scale, due to the extreme complexity of such a measure, is still in doubt; as yet, not enough research has been done to clarify the validity of the SORT.

The SORT has been used by many as a measure of rigidity as well as other personality variables. Part of the original Rorschach theory (Rorschach, 1942) addressed itself to rigidity, and certain Rorschach determinants were theoretically indicative of rigidity. An excess of form-dominated percepts was cited by Klopfer and Davidson (1962) as indicative of constriction or rigidity. Many of the measures of rigidity on the standard Rorschach and the SORT have not fared too well when subjected to an empirical test.

A couple of researchers (Langer and McKain, 1964) compared several of the SORT measures with the Test of Behavioral Rigidity. The SORT indicators of rigidity were not particularly borne out. Several indicators were tested by Becker (1954) using a combination of Rorschach variables advanced by Fisher (1950). The time necessary to perceive the effect produced by special (aniseikonic) lenses was compared to Rorschach measures of rigidity. The Rorschach measures reflected rigidity according to Becker's results. Another study bearing upon the utility of the Rorschach as a measure of rigidity was done by Johnson and Stern (1955). The subjects were Protestant seminarians. The idea of the study was to determine if a person responding in a rigid way on one set of stimuli would do so on other stimuli. Various lengths of time, 13 to 30 flashes per second, were given to intermittent flashing of a light upon a screen. A moderate correlation was found.

Numerous Rorschach variables in various combinations have been used as measures of rigidity. They have met with varied success. The utility of Rorschach measures of rigidity is complex and unclear; some indices are supported while others are not. Unfortunately, even less is known regarding measures of rigidity derived from the SORT.

The Welsh Figure Preference Test (WFPT). The WFPT consists of 400 black and white figures or drawings of many different types such as: freehand, ruled-line, symmetrical, asymmetrical, largely dark or black, sex symbols, and numerous others. The WFPT represents a kind of visual takeoff on the familiar MMPI as a measure of personality differences. The test was devised by G. Welsh and published by the Consulting Psychologist Press (1959). The test has indicated promise as a means of assessment in several studies, but it is still an exploratory, research device. Some of the scales were developed as an outgrowth of empirical data derived from research (Barron, 1952) and relate to such variables as ethnocentrism (Rosenberg and Zimet, 1957). Most of the scales, however, do not have this empirical basis. Some scales, such as the movement scale representing a kinetic quality in the drawing, were determined by a group of judges; still other scales were determined on the basis of drawing content. The manual does not indicate reliabilities and validities, and the literature (Buros, 1965) indicates inadequately demonstrated reliabilities due to the sample's being too small.

Measure of Extrinsic Religious Values

Extrinsic religious values were measured by an Extrinsic Religious Values Scale (ERV). The present scale contains 35 items; it is a combination of two previously used scales by Wilson (1960) and by Feagin (1964).

Wilson (1960) devised a scale to measure extrinsic religious values containing 15 items which used incomplete statements about religious values with two alternate endings. One of the two endings indicated an extrinsic value; the other ending indicated an intrinsic value. The score was the number of extrinsic alternatives selected. This scale was used as Part I of the present scale. Feagin (1964) devised a scale, intended as a refinement of Wilson's instrument, to be used in a study of prejudice and religious types. Feagin's instrument had 21 items, with some of the items extrinsically stated and some intrinsically stated. The responses ranged from strong agreement to strong disagreement. Feagin's instrument provided Part II of the present measure of extrinsic religious values.

III. Administration and Scoring of Instruments

The four measures of perceptual rigidity and the measure of extrinsic religious values were administered to all subjects of this study at both EC and CMSC. The testing situations for all subjects were similar, with one principal exception. The necessary difference in the administration was that EC subjects were tested during three successive, regularly scheduled class periods of 50 minutes while the CMSC subjects were tested during one 2 1/2 hour special testing session. This difference was necessitated by problems of scheduling at CMSC.

The order of the tests was: Structured-Objective Rorschach Test, Cat-Dog Test, Extrinsic Religious Values Scale, Welsh Figure Preference Test, and the Boring Ambiguous Face. The order of testing was the same at both colleges.

Boring Ambiguous Face

Administration. The Ambiguous Face was the only measurement used which was individually administered. Five Evangel College psychology students were given a brief training for administering the Ambiguous Face, including several observed trial administrations by each tester. The administration involved instructions to each subject tested, presentation of the Ambiguous Face and the elicited response, immediate re-presentation of the Ambiguous Face and the elicited response for a second percept, timing both presentation and re-presentation by stopwatch, and finally the recording of results on a standard data form. The instructions to the subjects and the inquiry period concerning the percept formed were of a nondirective nature following a Rorschach-like procedure. The 5 1/2 x 3 3/4 inch photocopied ambiguous face picture, instructions, and the ambiguous face data form used by the trained testers appear in Appendix A.

Scoring. The scores were of two types. One was simply the percept seen by the subject; this percept was classified as _old woman_, _young woman_, _other_, and _none_. There was a percept obtained from initial presentation and a second percept obtained from re-presentation. The other type of data was time to the nearest second. There were times for presentation to percept formation and for re-presentation to second percept formation. This information was entered on the ambiguous face data form by the testers.

Cat-Dog Test

Administration. The original 13 black and white line drawings by Krasno were photographically copied by the researcher upon positive transparency film to make a series of slides suitable for group projection. The slides were shown through a 500 watt Viewlex projector with a shutter added to provide projections of one-second duration.

The subjects were given an answer sheet with instructions as shown in Appendix B. The subject had only to circle the appropriate percept upon the answer sheet. A practice projection of a different black and white slide was provided immediately prior to the cat-dog series in order to familiarize the subjects with the task.

There were two departures from previous usage of the Cat-Dog Test. The first was the use of projection slides for group administration. The second deviation was the use of a common viewing duration of one second.

Scoring. The score on the Cat-Dog Test is simply the number of the last slide marked on the answer sheet as a cat percept. When vacillation of the percept occurred, the vacillation was interpreted as indecision and an expression of inflexibility; the score was still the last marked response of a cat percept.

S-O Rorschach Test

Administration. The SORT, as it was administered to the two groups of subjects, used projection transparencies of the 10 standard ink blots. Each subject had a separate, non-illustrated booklet of responses and an answer sheet. The method of administration followed precisely the directions provided in the SORT manual.

Scoring. The scoring of each SORT required the use of 15 hand-scoring stencils which provided the raw scores. The raw scores were converted into T scores by the use of the manual. When all of the score transformations and factor combinations were complete, these provided 30 separate ratings for each subject.

Welsh Figure Preference Test

Administration. The administration of the WFPT followed the procedure indicated in the test's manual. Each subject was given a test booklet containing the 400 figures, and an answer sheet. The subjects were asked to perform a preference dichotomy of like--don't like for all items. There was no time limit, but most subjects took about 30 minutes to complete the test.

Scoring. The scoring of the WFPT required the construction of hand-scoring stencils based upon lists of the items provided in the manual constituting each scale. All of the scales were scored even though a rationale cannot be developed for all of the scales, with the exception of the scale for children (CN), which was not used.

Extrinsic Religious Values Scale

Administration. The ERV was distributed to each subject and the instructions printed upon the test itself were read aloud by the tester. Since the test contains two parts and the task involved and instructions given are different, both sets of instructions were read and the differences pointed out. Each subject received a consumable test booklet with an integral answer sheet.

Scoring. The ERV produces one, single score which reflects extrinsic religious values. Part I of the ERV, which has two alternate endings representing an extrinsic and intrinsic response, was scored by counting the number of extrinsic responses. Part II has some items stated in an extrinsic and some in an intrinsic direction. The answers were: strongly agree, agree, disagree and strongly disagree. The undecided alternative was not available to the subjects. Part II was scored by counting the number of items reflecting an extrinsic direction. The total score was the sum of Parts I and II, and the higher score indicates a higher extrinsic value.

The information from each subject was placed upon an individual data sheet. These data were entered on Fortran coding forms from which data processing cards were punched and verified. The information concerning the five tests, with their numerous subtest scores, necessitated the use of three data processing cards for each subject. The statistical analysis was largely done at the Rutgers Computer Center.

IV. Statistical Procedures

In this section the various statistical procedures used to test the hypotheses are discussed. The data were of three basic kinds: (1) group membership, (2) four measures of perceptual rigidity, and (3) a measure of extrinsic religious values as related to group membership representing religious conservatism. The hypotheses were tested by making three basic comparisons; each basic comparison involved numerous small comparisons. Each hypotheses and the comparisons designed to test the hypothesis are stated together with the specific procedures and statistical methods used before a subsequent hypothesis is discussed.

Hypothesis 1

Measures of perceptual rigidity are related to group membership, representing religious conservatism. The four measures of perceptual rigidity were compared on the basis of EC-CMSC group membership.

The responses to the ambiguous face were compared in two ways: the particular percept seen and the time required for percept formation. The responses for EC and CMSC were separated on the basis of the particular percept seen. The responses were placed in one of the following categories: old woman, young woman, other, and none. This provided a 2 x 4 Chi-square table which was tested for significance. Only the percepts formed during the re-presentation were tested since the first percept was such an easy task. The two sets of times of percept formation and re-formation were tested by analysis of variance. The measurement of time in seconds meets the theoretical requirements necessary for analysis of variance since it provides an interval measurement.

The Cat-Dog Test provides a simple, single score for each subject which was used to compare EC and CMSC group differences and sex differences by a two-way analysis of variance. This analysis permitted examination of the contribution made by group and sex to the observed differences.

The SORT's 15 variables were tested for significant group differences by the Mann-Whitney U test, a nonparametric measure which is nearly as powerful as the t test. According to Cronbach (1949), the usual parametric tests do not apply to the Rorschach variables. The SORT variables are ordinal scales at best; hence parametric statistics, which require normally distributed interval scales, were not appropriate. The rank comparison of the Mann-Whitney U test was appropriate since it was designed to handle data of an ordinal variety. The technique followed was that indicated by Siegel (1956) for large groups. The resulting statistic presents a U score and this is translated into the familiar z score. These SORT variables which reached significance were tested by the same statistical procedure, but comparing EC with CMSC males and EC with CMSC females, to determine the contribution of sex differences upon the observed group differences. This does not provide as neat an assessment of sex interaction as found in a two-way analysis of variance, but it does afford a rough scrutiny of the contribution made by sex differences. This was necessary due to the ordinal nature of the Rorschach variables.

Aside from the 15 SORT variables, the SORT also has 13 ratings ranking subjects into five categories and five simple dichotomous check ratings. The 13 ratings which employ five categories were tested for significant EC-CMSC group differences by the Kolmogorov-Smirnov test. This nonparametric statistical test is warranted due to the ordinal nature of the data and because this test is designed to handle multi-category rankings. The responses for the EC and CMSC groups were separated on the basis of the five categories of the ratings. The two resulting distributions were then compared by the Kolmogorov-Smirnov test. The five check ratings were tested for group differences by Chi-square. The responses for the EC and CMSC groups were separated on the basis of these dichotomous ratings. The resulting 2 x 2 Chi-square tables were tested for significance.

The Welsh Figure Preference Test was analyzed for EC-CMSC group differences by the Mann-Whitney U test. Each of the 26 Welsh scales provided a basis for comparison of the EC and CMSC groups. Each of these scales provided an ordinal measure. The reasons for the choice of this statistical test are the same as those underlying its use with the SORT.

Hypothesis 2

Measures of perceptual rigidity are related to a measure of extrinsic religious values. The four measures of perceptual rigidity were compared on the basis of a high-low extrinsic religious values measurement. In the testing of the second hypothesis the subjects from both colleges were pooled into one large sample. This total sample was then dichotomized into a high extrinsic group and a low extrinsic group based upon each subject's ERV score. A score near the median was used for dichotomizing the total sample. This basis for comparison, using high-low extrinsic religious values, was used throughout the testing of the second hypothesis with the exception of the Cat-Dog Test, which used the actual ERV scores. The statistical tests used were identical to those used in testing the first hypothesis, with the above mentioned exception of the Cat-Dog Test. The methodological circumstances were the same as those found under the first hypothesis. Although the EC-CMSC groups were replaced with high-low extrinsic religious value groups, the rationale underlying the use of each test was identical.

The Ambiguous Face, as previously indicated, provided two kinds of data. The responses were categorized on the basis of the percept utilized (*old*, *young*, *other*, and *none*) and the high-low extrinsic religious values groups were tested for significance by Chi-square. The two times for percept formation during presentation and re-presentation were subjected to a two-way analysis of variance.

The Cat-Dog Test was the one comparison which was different from the pattern established under the testing of the first hypothesis. The Cat-Dog Test score for each subject was compared to the ERV score by a product moment correlation. This type of comparison by correlation allowed use of Cat-Dog Test scores and avoided the loss of information due to dichotomizing the scores. The correlation was tested for significance.

The SORT was subjected to the same statistical tests used in the first hypothesis. The Mann-Whitney U test provided a z score for the 15 SORT variables. The Kolmogorov-Smirnov test was used on the 13 five-category ratings; Chi-square was used on the check ratings. The dichotomized ERV scores provided the two groups for the comparisons.

The Welsh Figure Preference Test was tested for differences of the high-low extrinsic religious values groups by the Mann-Whitney U test.

Hypothesis 3

The measure of extrinsic religious values is related to group membership, representing religious conservatism. This hypothesis compared EC against CMSC on the basis of extrinsic religious values scores.

The group differences were tested using a two-way analysis of variance upon the ERV scores for EC and CMSC. This provided information regarding group differences, sex differences, and the interaction of these.

Summary

This chapter has described the five devices used in this study for measurement as well as the administration and scoring procedures used. Four of the measures were perceptual tasks. They were: Boring Ambiguous Face, Cat-Dog Test, Structured-Objective Rorschach Test, and the Welsh Figure Preference Test. The other device used was the Extrinsic Religious Values Scale designed to measure an intrinsic-extrinsic religious values dimension. The statistical procedures used to test the study's three hypotheses were presented and discussed briefly; the statistics used were primarily of a nonparametric nature.

CHAPTER III

ANALYSIS OF DATA

The data collected from the two different college samples are analyzed in this chapter. The main purpose of this study was to determine the relationship among measures of perceptual rigidity and aspects of religion; the data bearing upon these will be dealt with in this chapter. The implications of the findings will be examined in the next chapter. Because of the multiplicity of statistical approaches needed to analyze the data, the presentation of this chapter follows closely the format previously used. The data for Hypothesis 1 will be examined in their entirety; this will be followed by Hypotheses 2 and 3. The statistical level of significance used will be .05. A one-tailed test will be used for the first and second comparisons since the direction of the expected results was theoretically known. A two-tailed test will be used for the third comparison since the direction of the expected results was uncertain. Theoretical considerations would indicate that the EC group would be higher than the CMSC group on extrinsic religious values; a careful examination of the ERV scale and a brief pre-test indicated strong possibility of an expected result in opposition to the theoretical direction. For this reason a two-tailed test was substituted on the third comparison.

The Samples: EC and CMSC

The subjects at both colleges were drawn from available General Psychology classes during the first several weeks of the fall semester, 1968. It was necessary to test early in the semester so that the measurement would not be extensively affected by college experience. The use of such classes was necessitated by virtue of feasibility, especially at CMSC. Both EC and CMSC General Psychology classes are designed primarily for freshmen as an introductory, general education requirement. The total enrollment in the two General Psychology classes at EC was used. Use of the partial enrollment at CMSC was necessitated by the difficulties of scheduling a testing session. Volunteers were drawn from one large General Psychology section. Testing sessions were somewhat different at the two colleges. The testing of EC subjects took place during three regularly scheduled, 50-minute class periods. The testing of CMSC subjects was carried out during one 2 1/2 hour session. The order of testing was the same for both groups.

The EC and CMSC groups were similar in several ways. The mean ages for both groups were very nearly the same

(Table 1). The age of the subjects was about 19 years. The mean intelligence scores for both college groups on different tests indicated that both were slightly above the national averages for 4-year colleges as indicated in the respective test manuals. It was not possible to obtain results from the same intelligence test for both groups since EC uses the ACE Psychological Examination and CMSC uses the more recent Schools and Colleges Abilities Test. These tests are very similar in nature; correlations of .92 have been reported between the two tests, which indicates something of the strength of the similarity. The two college groups were of similar intellectual ability.

TABLE 1

COMPOSITION OF GROUPS BY AGE AND INTELLIGENCE

Age	Males	Females	Total
EC	19.0	18.9	18.9
CMSC	19.8	18.0	19.3
Intelligence		Mean	S.D.
EC	53 %ile ACE	M = 96.1	= 21.0
CMSC	55-62 %ile SCAT	M = 70.8	= 14.2

The original purpose of the study was primarily to measure freshmen. The EC group was composed of 86% freshmen, and the CMSC group was composed of 71% freshmen (Table 2).

The two college groups differed in a number of other ways too. The EC group was about twice the size of the CMSC group. The EC group contained 140 subjects originally; however, 18 subjects were lost due to absence during one or more of the testing sessions. The perceptual nature of the data, the results of which are easily altered by verbal mediation through unavoidable, informal discussions after the testing sessions, warranted

TABLE 2

COMPOSITION BY SEX AND CLASS
OF EC AND CMSC SUBJECTS

Sex	EC	CMSC	Class	EC	CMSC
Male	45 (40)*	25	Freshmen	109 (86%)	41 (71%)
Female	95 (87)*	33	Sophomores	19	13
Total	140 (127)*	58	Upperclassmen	12	4

Thirteen EC subjects were lost from study due to absence during a testing session.

* Number left after 13 absent subjects deleted.

the exclusion of subjects who missed a testing session. The CMSC group contained 58 subjects; none was lost due to absence since the testing for this group was conducted in one longer session. The EC sample contained a considerably higher proportion of women than did the CMSC sample. This was simply due to the vagaries of class scheduling and chance.

The final observed differences between the two groups, which were of considerable importance to the purposes of this study, were attendance at a denominationally-controlled college or a state college, and religious affiliation. The EC group was, in its entirety, composed of youth from the Assemblies of God, a religiously conservative, Pentecostal faith. The CMSC group was composed of students with diverse religious affiliations, representing 11 denominations. The denominations most frequently represented were Methodists, Catholics, and Baptists. Five subjects were without religious affiliation. Table 3 indicates this diversity.

It can generally be asserted that, other than group size, which ordinarily can be compensated for statistically, the two groups were similar college populations with the exception of attendance at a denominationally-controlled college or a state college, and religious affiliation. The EC group was a religiously homogeneous, conservative group; CMSC was a religiously heterogeneous group.

TABLE 3

CHURCH AFFILIATION OF CMSC SAMPLE

Denomination	Affiliated	Strongly Affiliated	Total
Baptist	5	4	9
Catholic	4	7	11
Christian Church	3	1	4
Episcopal	2	-	2
Latter Day Saints	-	1	1
Lutheran	1	4	5
Methodist	11	2	13
Southern Baptist	-	1	1
Presbyterian	3	-	3
United Church of Christ	2	1	3
Other	1	-	1
None	-	-	5
Total			58

Hypothesis 1

Measures of perceptual rigidity are related to group membership representing different religious orientations. This hypothesis utilized the EC and CMSC groups and compared them on the basis of four perceptual measures to determine whether differences existed between these groups. The results of each of the four perceptual tasks will be reported in turn.

Boring Ambiguous Face

The particular percept seen, whether old or young woman, and the time necessary to shift from an originally formed percept to a new, re-formed percept are indications of rigidity; the longer the time the greater the inflexibility.

The frequencies of the old, young, other, and none percept responses for EC and CMSC were tested by Chi-square. The Chi-square of 7.065, with 3 degrees of freedom, reached the .10 level but did not reach the necessary .05 level of significance. In this case, the cell which contributed to the observed difference was the other percept cell. As may be seen in Table 4, the frequencies in this cell were about equal for EC and CMSC although the CMSC sample was less than half the size of the EC sample.

TABLE 4

FREQUENCIES OF AMBIGUOUS FACE PERCEPTS

Group	N	Percept Formed			
		Old	Young	Other	None
EC	127	30	16	28	53
CMSC	58	7	5	23	23

X^2 = 7.065, 3 *df*, not significant.

There were no significant EC-CMSC group differences for the length of time necessary for percept re-formation as tested by an analysis of variance, but there was a significant amount of interaction. This is indicated in Table 5. The results did not alter whether all possible percepts (*old*, *young*, *other*, and *none*) or other logical combinations (*old*, *young* or *old*, *young*, *other*) were used in the analysis; none of the group comparisons was significant.

There were, then, no significant differences on the Boring Ambiguous Face, except for interaction. The Boring Ambiguous Face did not bear out the first hypothesis.

TABLE 5

ANALYSIS OF VARIANCE:
AMBIGUOUS FACE

Source	*F* Ratio	*df*	Significance
Time of re-formation for *old*, *young*, *other*, or *none* percepts			
Male vs. female	1.130	1:181	N.S.
EC vs. CMSC	0.038	1:181	N.S.
Interaction	5.155	1:181	.05
Time of re-formation for *old*, *young*, and *other* percepts			
EC vs. CMSC	0.291	1:107	N.S.
Time of re-formation for *old*, *young* percepts			
EC vs. CMSC	0.217	1:56	N.S.

Cat-Dog Test

Persistence in maintaining the original cat percept into the Cat-Dog series of slides was designed as an indication of perseveration or rigidity; the higher the score the greater the perseveration. Table 6 indicates that there were no significant results at the .05 level of significance using an analysis of variance. The only result that approached significance was a difference, at the .10 level, between men and women with both groups of men having higher means than the groups of women. It is clear that no EC-CMSC group difference existed on the Cat-Dog Test and that this test did not support the first hypothesis.

TABLE 6

ANALYSIS OF VARIANCE:
CAT-DOG TEST

Source	F Ratio	df	Significance
EC vs. CMSC	0.483	1:181	N.S.
Male vs. female	3.015	1:181	.10
Interaction	0.904	1:181	N.S.
All effects	1.216	3:181	N.S.

Structured-Objective Rorschach Test

The SORT provides numerous variables and ratings, some of which are used here as measures of rigidity. The SORT was the measure which provided most support for the first hypothesis. Table 7 presents the results on the 15 SORT variables. The statistical test used was the

TABLE 7

15 SORT VARIABLES: MANN-WHITNEY *U* TEST

Type of Response		*z* Score
Location		
Whole	(*W*)	-2.02*
Large detail	(*D*)	+2.09*
Small detail	(*Dd*)	+1.19
Space	(*S*)	+0.54
Determinant		
Form	(*F*)	+1.88*
Poor form	(*F-*)	-0.03
Human movement	(*M*)	+1.42
Animal movement	(*FM*)	+0.62
Color, good form	(*FC*)	-0.01
Color, poor form	(*CF*)	-1.30
Shading	(*Fch*)	-1.90*
Content		
Animal	(*A*)	+0.65
Human	(*H*)	+0.71
Popular	(*P*)	-0.95
Original	(*O*)	+0.58

+ indicates EC higher on that variable

- indicates EC lower on that variable

* indicates .05 level of significance

nonparametric Mann-Whitney U test; due to the large size of the sample used, the results are reported in the form of the easily interpreted z scores. Four of the 15 SORT variables differed significantly at the .05 level for the EC-CMSC groups. Table 8 presents the results on 23 SORT ratings. The ratings involving five categories (1-5) were compared by the Kolmogorov-Smirnov test; the simple check ratings were compared by Chi-square. The results for both are reported in the form of the familiar Chi-square distribution. One of the ratings produced results that differed significantly at the .05 level and another at the .02 level.

The EC subjects differed from CMSC subjects on two SORT location variables (Table 7). The EC subjects utilized significantly fewer whole (W) blot responses. Since the SORT is not a free association test as found in the standard, individual Rorschach, the several location variables are not entirely independent of each other, but rather are tied to certain other location variables. It was not surprising, then, to find that EC subjects used significantly more large detail responses (D). There were no significant differences between EC and CMSC subjects on the usage of minute detail (Dd) or of space (S) location responses. However, the frequency of subjects having an excessively large number of minute detail

TABLE 8

SORT (1-5) RATINGS

Rating	X^2	Significance	Rating	X^2	Significance
W:M		N.S.	*F::S:Fch*		N.S.
F:M	6.63 2 *df*	.05	*FM::FC:M*		N.S.
D:M	8.00 2 *df*	.02	*FM:F-::F:M*		N.S.
F-:F		N.S.	*M::FC:CF*		N.S.
M:P::A		N.S.	*O:P*		N.S.
CF:F		N.S.	*FM:M*		N.S.
FC:M		N.S.			

using Kolmogorov-Smirnov $X^2 = 4D^2 \frac{n_1 n_2}{n_1+n_2}$

(*Dd* 63), when EC and CMSC groups were tested by Chi-square, provided results very close to the .05 level of significance. When Chi-square was used without correction for continuity, significant results were found; when Chi-square was used with Yates' (1961) correction, significant results were absent. This indicates that the number of subjects forming a large number of percepts from minute detail approached significance at a .10 level.

The EC subjects possessed the greater amount of such responses.

The EC subjects differed from the CMSC subjects on two SORT determinant variables as shown in Table 7. One of the principal SORT variables under scrutiny in this study was the form-dominated (F) variable. These are percepts formulated upon the shape or form of the blot. The EC subjects were significantly higher in utilizing form-dominated responses than the CMSC subjects. Another determinant which differed in usage between the two groups was the amount of responses utilizing the shading of the blot (Fch). The EC subjects used fewer shading responses.

An examination of Table 9 indicates the effects of sex upon the observed EC-CMSC group differences. There was only a minute amount of interaction due to sex differences on the SORT variables of W and Fch. The M variable showed some interaction. The D and F variables showed considerable interaction. The EC-CMSC men strongly differed from each other on the D and F variables, and the men contributed heavily to the observed group differences. Thus, the EC-CMSC differences on D and F variables were due partially to basic group differences and partially to sex differences. The differences on W, Fch, and M were due mainly to EC-CMSC differences and not sex differences.

TABLE 9

SIGNIFICANT SORT VARIABLES: MANN-WHITNEY U TEST
SEX INTERACTION EFFECT

SORT Variable		EC Males versus CMSC Males	EC Females versus CMSC Females	Comments Regarding Interaction
Whole	(W)	-1.56	-1.08	Minimal
Large detail	(D)	+2.31	+0.97	Considerable
Small detail	(Dd)	-0.11	+1.45	Considerable
Form	(F)	+1.97	+0.90	Considerable
Human movement	(M)	+0.63	+1.44	Moderate
Shading	(Fch)	-1.08	-1.40	Minimal
		EC N = 40	EC N = 87	
		CMSC N = 25	CMSC N = 33	

+ indicates EC higher

- indicates EC lower

Table 10 indicates the effect of intelligence upon the SORT variables. Only the W variable was influenced by intelligence; the rest of the variables were not influenced by intelligence. This was determined by a rank correlation of ACE Psychological Examination scores with the SORT variables. Intelligence, therefore, did not contribute much to the EC-CMSC differences on the SORT.

TABLE 10

SIGNIFICANT SORT VARIABLES: RANK CORRELATION INTELLIGENCE INTERACTION EFFECT

SORT Variable	Rank Correlation with ACE Scores for 30 Subjects
F	.094
W	.484
D	.057
Fch	.063

It is difficult to assign clearcut meaning to these findings. Four of the 15 SORT variables produced significant group differences. The variables which were significant fit logically into the Rorschach rationale regarding rigidity, but the pattern was not a complete one. The EC subjects gave indication on the SORT of being form-dominated.

Welsh Figure Preference Test

The WFPT has numerous scales, some of which may be used as measures of rigidity. None of the WFPT scales produced any significant differences between the EC and CMSC groups. Only one scale, of 26 different scales, reached a .10 level of significance. It was a scale of mixed sex symbols; EC subjects showed a greater dislike of these items. The WFPT was not indicative of any significant differences between the EC and CMSC groups; therefore, it did not support the first hypothesis.

Summary of Findings Regarding Hypothesis 1

Three of the four perceptual measures did not significantly support the first hypothesis. The SORT provided some support for the hypothesis with four of 15 variables significantly different; the significantly different variables were of such a nature and direction as to fit logically into the Rorschach rationale regarding rigidity, but was not a complete pattern. The hypothesis that measures of perceptual rigidity are related to group membership representing different religious orientations was neither supported nor rejected.

Hypothesis 2

Measures of perceptual rigidity are related to a measure of extrinsic religious values. This hypothesis utilized the total sample dichotomized into a high extrinsic religious values group (high ERV) and a low extrinsic religious values group (low ERV) as measured by the Extrinsic Religious Values Scale. These two groups were compared on the basis of four perceptual measures to determine whether differences existed between these groups. The results of each of the four perceptual tasks will be reported in turn.

Boring Ambiguous Face

The frequencies of old, young, other, and none percept responses for the high and low ERV groups were tested by Chi-square (Table 11). The Chi-square of 7.9, with 3 degrees of freedom, reached the .05 level of significance. The high ERV group had a larger frequency in the none category and a lower frequency in the old and young percept categories.

TABLE 11

AMBIGUOUS FACE PERCEPT FREQUENCIES

Group	N	Percepts			
		Old	Young	Other	None
High ERV	91	11	10	26	44
Low ERV	94	26	11	25	32

$X^2 = 7.9$ df 3 significant at .05, one-tail test

There was a significant high-low ERV group difference for the length of time for percept re-formation. Using the elapsed time of all the percept categories, including the none category, which received a time of 180 seconds, a correlation of 0.174 was found. This correlation, while low, is significant at a .05 level. This result indicates that to a small extent the higher ERV group needed a significantly longer amount of time for percept re-formation.

The results of the data from the Boring Ambiguous Face, using Chi-square and a correlational method, supported the second hypothesis. The high ERV subjects gave indication of a greater amount of perseveration.

Cat-Dog Test

The ERV scores were compared with the Cat-Dog Test scores using a correlational technique. No relationship existed between the ERV measure and the Cat-Dog Test scores. It was, therefore, not necessary to use the more appropriate Mann-Whitney U Test upon these scores since it was evident that no relationship existed. This perceptual measure did not support the second hypothesis.

Structured-Objective Rorschach Test

Table 12 indicates that four of the 15 SORT variables were significantly related to ERV scores using a correlational technique. Each SORT variable was then subjected to the Mann-Whitney U Test to compare the high and low ERV groups for significant differences. Table

14 indicates significant differences for the following SORT variables: W, D, FC, and Fch. Among the SORT ratings none approached significance.

TABLE 12

SORT VARIABLES: CORRELATION WITH ERV

Variable		Extrinsic Religious Values
Whole	(W)	0.13387*
Large detail	(D)	-0.11620
Small detail	(Dd)	-0.01902
Space	(S)	-0.03620
Form	(F)	-0.13126*
Poor form	(F-)	0.04233
Human movement	(M)	0.03503
Animal movement	(FM)	-0.07062
Color, good form	(FC)	-0.13144*
Color, poor form	(CF)	0.08807
Shading	(Fch)	0.16496*
Animal content	(A)	-0.08440
Human content	(H)	0.07427
Popular	(P)	0.09466
Original	(O)	-0.02195

TABLE 13

WFPT VARIABLES: CORRELATION WITH ERV

Variable		Extrinsic Religious Values
Don't like	(DL)	-0.03418
Conformity	(CF)	0.03248
Barron-Welsh	(BW)	-0.02213
Revised art scale	(RA)	-0.00142
Male-female	(MF)	0.00596
Neuropsychiatric	(NP)	0.11224
Ruled, simple	(RL)	-0.03109
Freehand, total	(FH)	-0.04829
Simple, total	(SM)	-0.09129
Complex, total	(CM)	0.01388
Ruled line, simple	(RS)	-0.10140
Freehand, simple	(FS)	-0.08142
Ruled line, complex	(RC)	0.09671
Freehand, complex	(FC)	0.01635
Combined	(CO)	0.00148
Shading	(SH)	0.01159
Black	(BK)	-0.14928*
Dotted	(DT)	-0.06032
Movement	(MV)	-0.04159
Sex symbol, male	(XM)	0.00270

TABLE 13--Continued

Variable		Extrinsic Religious Values
Sex symbol, female	(XF)	-0.05656
Sex symbol, combined	(XC)	-0.03874
Sex symbol, neutral	(XN)	-0.03803
Sex symbol, mixed	(XX)	-0.04099
Figure--ground	(FG)	0.07267

The high ERV group gave significantly more responses using whole blot (W) locations; they also used fewer large detail (D) responses. The high ERV group saw fewer percepts using form-color determinants, but saw a greater number of percepts using shading determinants. It is interesting to observe that there are very close similarities of the above findings with those found in the first hypothesis comparing EC and CMSC. In this second comparison, using high-low ERV groups, the form-dominated (F) percept was not significantly different (z = 1.33, .10, one-tail test) for the two groups; whereas, it was significantly different for the EC-CMSC comparison. The rest of the differences are roughly similar for both comparisons.

TABLE 14

15 SORT VARIABLES: MANN-WHITNEY U TEST

Variable		z Score
Location		
Whole	(W)	+1.836*
Large detail	(D)	-2.342*
Small detail	(Dd)	-0.904
Space	(S)	-0.512
Determinant		
Form	(F)	-1.326
Poor form	(F-)	+0.506
Human movement	(M)	+1.458
Color, good form	(FC)	-1.845*
Color, poor form	(CF)	+1.426
Shading	(Fch)	+1.807*
Content		
Animal	(A)	-0.314
Human	(H)	+1.473
Popular	(P)	+1.250
Original	(O)	-0.738

+ indicates high ERV higher on that variable

- indicates high ERV lower on that variable

* significant at 5% level

From Table 15 it appears that there was a moderate amount of sex interaction. Sex differences contributed to the observed high-low ERV group differences; therefore, not all of the observed differences were due to extrinsic religious values alone. The *W* and *Fch* variables were considerably affected by sex interaction; the *D* and *FC* variables were less affected by sex interaction.

TABLE 15

SIGNIFICANT SORT VARIABLES: MANN-WHITNEY *U* TEST
SEX INTERACTION EFFECT

SORT Variable		High ERV Males vs. Low ERV Males	High ERV Females vs. Low ERV Females	Comments Regarding Interaction
Whole	(*W*)	-0.6192	-1.8153	Considerable
Large detail	(*D*)	1.1882	2.0434	Moderate
Color, good form	(*FC*)	1.0978	1.4548	Minimal
Shading	(*Fch*)	-0.3893	-1.8945	Considerable

High ERV Males N = 31 High ERV Females N = 60

Low ERV Males N = 34 Low ERV Females N = 60

The SORT bears out some perceptual differences between high and low ERV groups. The form-dominated responses for the high ERV group only reached the .10 level of significance and were, therefore, not significantly different; but it was a negative relationship with the high ERV group using fewer form-dominated percepts. The rest of the variables which differed did not give a picture of rigidity for the high ERV group; if anything, they supported the idea of rigidity and the low ERV group being related. The results of the SORT data did not support the second hypothesis.

Welsh Figure Preference Test

There were four out of 23 WFPT scales which significantly differed between the high-low ERV groups (Table 16). The Mann-Whitney *U* Test was used for this comparison. The high ERV group was elevated on the neuropsychiatric scale (*NP*). This scale is an empirical scale which indicates item choices similar to neuropsychiatric patients. The high ERV group was also higher in its acceptance of simple, symmetrical, ruled-line figures (*RS*) and of combined ruled-line and simple freehand figures (*SM*). The high ERV group was lower in its acceptance of figures which connote a kinetic, movement quality similar to the Rorschach movement responses.

TABLE 16

WELSH VARIABLES: MANN-WHITNEY U TEST

Variable		z Score
Don't like	(DL)	-0.264
Conformity	(CF)	-0.785
Barron-Welsh	(BW)	+1.220
Revised art scale	(RA)	+1.172
Male-female	(MF)	+0.628
Neuropsychiatric	(NP)	-1.976*
Ruled, simple	(RL)	+1.133
Freehand, total	(FH)	-0.1703
Simple, total	(SM)	+1.9481*
Complex, total	(CM)	-0.550
Ruled line, simple	(RS)	+2.126*
Freehand, simple	(FS)	+1.104
Ruled line, complex	(RC)	-0.405
Freehand, complex	(FC)	-0.771
Black	(BK)	+1.224
Dotted	(DT)	+1.199
Movement	(MV)	+2.201*
Sex symbol, male	(XM)	+0.1472
Sex symbol, female	(XF)	+0.421
Sex symbol, combined	(XC)	+0.233

TABLE 16--Continued

Variable		$\underline{z}$ Score
Sex symbol, neutral	(XN)	+1.263
Sex symbol, mixed	(XX)	+0.252
Figure--ground	(FG)	+0.618

+ = high ERV group has low rank on Welsh (because based on $\underline{z}$ for $\underline{U}$; high $\underline{U}$ = low rank, low $\underline{U}$ = high rank

- = high ERV group has high rank on Welsh

* indicates .05 level of significance

The results from the WPFT indicated that the high ERV group chose more freehand and ruled-line items which were simple and symmetrical. They also selected fewer items indicative of movement. Such results are indicative of rigidity. Four of the 23 WFPT scales supported the second hypothesis; however, not all of the WFPT scales fit closely into a rationale regarding rigidity. The second hypothesis received some support from the data of the WFPT.

Extrinsic Religious Values Scale

The ERV scale was used as a measure of extrinsic values in both the second and third hypotheses. Since the ERV is a combined longer scale than previously used, it was not possible to report from literature test-retest reliabilities for this measure. Consequently it was necessary to determine reliability of the new scale before making use of it. The ERV scale was administered twice to a college class with a one-week interval between the two measurements. Because of the nature of the ERV data, a rank correlation was deemed most appropriate. A test-retest correlation of 0.813 was obtained. This must be considered a high reliability for this type of measure.

Summary of findings regarding Hypothesis 2

A somewhat confused picture emerges from the comparison of high and low ERV groups on the four perceptual measures. Significant differences were obtained on two of the four perceptual measures, but the results were not altogether consistent.

No statistical relationship was found on the Cat-Dog Test. The Boring Ambiguous Face supported the second hypothesis; the WFPT lent some support with four of its 23 scales producing significant differences. The SORT produced some differences, but these were in the opposite direction of the hypothesis. The results, then, neither support nor reject the hypothesis that measures of rigidity are related to a measure of extrinsic religious values.

The ERV scale was found to be a measure possessing high test-retest reliability for the type of attitudinal measure that it is.

Hypothesis 3

The measure of extrinsic religious values is related to group membership representing different religious orientations. This hypothesis compared the EC subjects with the CMSC subjects on the measure of extrinsic religious values. The statistical treatment of the data was a two-way analysis of variance.

A brief scrutiny of Table 17 indicates that there was a highly significant difference between the EC and CMSC groups on the basis of the measure of extrinsic religious values. The observed F ratio value of 37.01 could occur only once in 1,000 times by chance with 1:181 degrees of freedom. Table 18 indicates that the means for both the EC men and women are considerably lower than the means of CMSC men and women. The differences, shown in Tables 17 and 18, are clear indication that the EC subjects scored lower on the measure of extrinsic religious values. The EC subjects were, thus, significantly more intrinsically religious valued.

TABLE 17

ANALYSIS OF VARIANCE EXTRINSIC RELIGIOUS VALUES

Source	F Ratio	df	Significance
Male vs. female	0.666	1:181	N.S.
EC vs. CMSC	37.010	1:181	.001
Interaction	1.028	1:181	N.S.

TABLE 18

MEANS AND STANDARD DEVIATION: EXTRINSIC RELIGIOUS VALUES

Group	Number of Subjects	Mean	S.D.
EC males	40	9.65	3.40
EC females	87	9.77	3.21
CMSC males	25	13.96	5.24
CMSC females	33	12.85	3.97

It is also important to note that there was virtually no difference in the means of the men and women at EC and at CMSC as shown in Table 18. Sex differences did not produce differences in the measure of extrinsic religious values. The differences came from the EC-CMSC group dissimilarities.

Summary of Findings

The first and second hypotheses regarding the relationship of measures of perceptual rigidity and aspects of religion were neither accepted nor rejected. The first hypothesis was not supported by three of the four perceptual measures; some support was provided by the SORT. The second hypothesis was not supported by two of the four perceptual measures; some support was provided by the Boring Ambiguous Face and the WFPT. The third hypothesis, that extrinsic religious values are related to group membership representing different religious orientations, was significantly supported. The relationship of intrinsic religious values with the EC group was an exceedingly strong one. There was no sex interaction effect; sex was not related to the intrinsic-extrinsic religious values continuum.

CHAPTER IV

DISCUSSION AND CONCLUSIONS

In this chapter theoretical considerations and possible meanings of the data are discussed. Implications of the results obtained with the Structured-Objective Rorschach Test (SORT) on the first hypothesis and the results with the Boring Ambiguous Face and the Welsh Figure Preference Test (WFPT) on the second hypothesis will be especially examined. The differences found regarding a measure of extrinsic religious values and the two college groups, EC and CMSC, will be considered. Finally, some of the problems regarding the devices used for measurement will be considered.

The first and second hypotheses concerned the relationship of four measures of perceptual rigidity and aspects of religion. The two hypotheses were neither proved nor disproved. The SORT produced some significant differences when comparing the EC-CMSC groups. The WFPT and the Boring Ambiguous Face produced some significant differences in a comparison of the total sample dichotomized into high and low extrinsic religious values groups. The possible meanings of the results obtained by these devices will now be examined.

Perceptual Rigidity and Aspects of Religion

Three of the four perceptual measures used in comparing the EC-CMSC groups did not provide significant results supporting the first hypothesis. Such results would indicate no differences between the two college groups on measures of rigidity. The SORT, however, produced some significant differences in support of the hypothesis.

EC and SORT variables

The SORT produced differences between the EC-CMSC groups on two location (*W* and *D*) and two determinant (*F* and *Fch*) variables. Thus, differences occurred on four of the 15 SORT variables. The use of percepts involving whole (*W*) location responses was significantly less for the EC group. This group also used a statistically greater number of larger detail (*D*) responses. The minute detail (*Dd*) and space (*S*) responses were not significantly different. These variables are somewhat tied together since the SORT is an objective-type test; an increase of one variable will often be accompanied by a decrease in another.

The SORT manual categorized the *W* variable as representative of theoretical intellectual functioning or "facility for generalizing, capacity for abstraction (Stone, 1958, p. 8)." The *D* variable is represented by the manual as practical intellectual functioning or "facility for dealing with concrete detail (Stone, 1958, p. 8)." According to Klopfer and Davidson (1962), an underemphasis upon W locations "may result from a lack of interest in seeking relationships among separate facts of experience (p. 131)." A strong use of W's, with good form, "is considered to reflect the ability to organize material . . . to be concerned with the abstract and theoretical (Klopfer et al, 1962, p. 131)." Klopfer and Davidson (1962) indicate that an emphasis upon the use of D locations represents "an interest in the specific, in details, in the concrete. This may be interpreted as a practical, everyday, common-sense application of intelligence . . . an overemphasis on D and d responses combined with adequate or better form level may mean that the individual feels somewhat insecure and feels safest when he sticks close to the obvious (p. 131)." The EC group utilized fewer W and greater D responses. The EC group either lacked interest or as inhibited in its ability to organize material or to be concerned with the theoretical. At the same time, the EC group appeared either heavily practical or somewhat insecure and stuck with the obvious in order to be safe. The above picture appears plausible when the nearly significant difference of excessive use of minute detail (Dd > 63) is taken into account. The use of excessive *Dd* is indicative of perfectionism (Stone, 1958) or of a pedantic, compulsive constriction (Klopfer and Davidson, 1962). The picture of EC subjects appears somewhat restrictive due to feelings of insecurity and desire for security in the commonplace. It must be remembered that intellectual levels of the two groups were similar; therefore, intellectual ability was not responsible for the observed location differences.

The use of percepts involving form-dominated (*F*) determinants was significantly greater for EC subjects than for CMSC subjects. The SORT manual categorizes the *F* determinant as representing structuring, "contact with reality, perceptive awareness (Stone, 1958, p. 8)." The SORT manual uses a combination of *S*, *F*, and *D* to represent compulsivity. It is clear that EC subjects are high on at least two of the three variables indicative of compulsivity. Various writers on Rorschach variables assign diverse meanings to the *F* determinant depending upon the percentage of *F* responses, form level, and usage of certain other determinants. According to Klopfer and Davidson (1962), a very high number of *F* responses is an indication of pathological constriction or lack of spontaneity. A more normal usage of *F* determinants may represent the "impersonal and matter of fact," and under some circumstances may represent "a rich personality that can be matter-of-fact when necessary," or may represent "the degree of intellectual control available . . . (p. 131)." The original purpose underlying the use of the SORT, in this study, was an expectation that the EC group would be higher in its use of form-dominated determinants. This expectation was significantly supported; however, there is no clear way of determining whether the use of *F* determinants is very high, indicating rigid constriction, or moderately high, indicating strong intellectual control. The wide diversity of interpretation for various percentages of the *F* determinant makes conclusive designation of meaning for the observed differences impossible. The investigator suggests that an interpretation of constriction, although not of a pathological extent, is warranted. The results of the other variables, along with the *F* variable, suggest that this may be the case. The fewer *W* and greater *D* location responses combined with fewer shading and color (.10 level) responses lead to this conclusion.

The EC group used statistically fewer shading (*Fch*) responses. The SORT manual categorizes the *Fch* determinant, when used in excess, as representing high anxiety. The SORT *Fch* is similar to Klopfer's Fc determinant. According to Klopfer and Davidson (1962), the "underemphasis on or lack of Fc implies lack of acceptance of affectional needs . . . (p. 136)." The EC group underemphasized the use of shading responses. It might be suggested that the EC subjects experience a lack in the acceptance of their affectional needs or lack in sensitivity and awareness to others. It may be that EC subjects experience anxiety about interpersonal relationships because of vulnerability and, therefore, must suppress such needs. This was essentially the assessment arrived at by Wood (1960) when he tested a group of Pentecostal Holiness subjects.

The WFPT provided several significant differences between the high-low extrinsic religious values groups; the differences fitted into a meaningful rationale.

The WFPT scales which produced statistical differences were: Ruled Simple (RS), Combined Simple (SM), Neuropsychiatric (NP), and Movement (MV). There were 23 WFPT scales used in this study. The RS and SM scales constitute items which have been selected on an a priori basis representative of simple, symmetrical forms; both ruled and freehand drawings are represented by these two scales. Some investigators (Barron, 1953; Barron and Welsh, 1952) found a relationship between some simple, symmetrical forms, as contained in the BW scale, and authoritarianism. The RS and SM scales were statistically elevated for the high extrinsic religious values group. The high Mann Whitney _U_ _z_ score indicates a low rank; however, both of these scales are "don't like" scales. This is similar to a grammatical double negative. The high extrinsic group was significantly more acceptant of these simple, symmetrical shapes. The strong acceptance of such items is construed as being form-dominated and representative of rigidity. There were several other scales such as the _BW_, _FS_, and _RL_ for which a rationale could be established; these scales were not significantly different, but they were in the appropriate direction.

The _NP_ scale, which is composed of items favored by neuropsychiatric patients, was significantly different with the high extrinsic group choosing items similar to the neuropsychiatric patients. It is impossible to assign any meaning to this relationship since not enough is known about this scale to know what it represents. It may be indicative of a kind of rigidity, or it may not.

The _MV_ scale was based upon the Rorschach concept of a movement determinant. This classification of the drawings into categories possessing or not possessing the movement or kinetic quality was done by Welsh (1959) using trained judges. In Rorschach theory (Klopfer and Davidson, 1962), the movement response is usually indicative of a somewhat higher level of productivity and is indicative of good ability and adjustment when found in larger quantity. The high extrinsic group was statistically less acceptant of drawings which possess this kinetic quality. The high extrinsic group did not accept drawings which require these somewhat more demanding percepts. The rejection of such items seems plausibly related to the greater acceptance of the stable, simple drawings. This is tenuously construed as indicative of being tied to form-dominance and representative of rigidity.

It is difficult to assign meaning to the results of the WFPT. The scales have not been clarified and validities have not been established. The results may be viewed as suggestive. The WFPT and the Boring Ambiguous Face produced results indicating that high extrinsic religious values and perceptual rigidity are somewhat related. This result, while it was not thoroughly consistent, fits logically as an extension of Allport's intrinsic-extrinsic dimension from the realm of attitudes into the realm of perception. This result tenuously indicates that this dimension has utility, not only for attitudes as shown by Wilson (1960) and Feagin (1961), but also for perception.

Extrinsic Religious Values

The most clear-cut result of this study was the highly significant relationship of an intrinsic-extrinsic religious values dimension, as measured by the Extrinsic Religious Values Scale (ERV). Subjects attending a religiously conservative, denominational college when compared on the ERV to subjects attending a state college were strongly intrinsic.

Allport (1963), in the Journal of Religion and Health, indicates that intrinsic religious values are religious values which are "deeply interiorized." He viewed such values as being useful to personality enrichment and growth. "The man of 'intrinsic' faith lives for his religion; his creed is a part of the pattern of his personality. He will have a tendency to be more mystical and more devout (Feagin, 1964, p. 3)." Allport's concept predicted a preponderance of extrinsically valued people among the religious, thus accounting for research evidence correlating religion and prejudice. Feagin (1964) found support for the hypothesis that religious conservatism would not be related to the intrinsic-extrinsic dimension. The present research indicates that EC subjects representing a strongly conservative religious orientation have intrinsic religious values to a very high degree. These subjects hold "deeply interiorized" religious values which indicate that, for them, religious experience has a strong, personal worth which is valuable and satisfying on a level beyond social enhancement or conformity.

According to the rationale developed by Allport (1963), the strong intrinsic value may be a hopeful omen regarding these conservative subjects. The concepts developed by Allport (1960, 1963) would indicate difficulty stemming from an extrinsic orientation; the strong intrinsic values shown by the conservative subjects in this study may indicate that the pitfalls, such as prejudice or authoritarianism, attending religious values observed by other researchers will not be observed in these subjects.

The subjects from the conservative college may have strongly developed superegos. The "interiorized" values which were observed indicate that such values are deeply involved in the pattern of personality. One would expect a strongly developed ethical or moral sense in these subjects; this may be at the expense of flexibility, involving a more rigid way of behaving. Satisfying, interiorized intrinsic values may be in conflict with strong religious controls and the concept of a threatening Deity, which may not be so satisfying. These appear antithetical; but it may be one of the reasons why some evidence of a relationship between EC subjects and perceptual rigidity has been found. The satisfying aspects of the religious experience may provide the basis for toleration of the threatening aspects of conservatism. The intrinsic worth makes threat and imposed control tolerable. If the foregoing assumptions are tenable, it is easy to understand the inward, approach-avoidance-like conflict which may create a ready propensity for rigidity.

Problems of Measurement

Several of the devices used for measurement in this study presented certain difficulties. They were: Boring Ambiguous Face, Cat-Dog Test, and Extrinsic Religious Values Scale.

Boring Ambiguous Face

The Boring Ambiguous Face ran into two related kinds of problems, one having to do with directions and the other with spacing or influence of other tests.

The directions used in presenting the ambiguous picture for percept formation and especially re-formation were apparently too nondirective. The concept of the nondirective Rorschach inquiry method was used for both directions and inquiry concerning the percept formed.

The inquiry aspect seemed appropriate, but the instructions "some people see more than one thing . . ." sent many subjects mentally scurrying for percepts other than a person. Instructions such as "some people see more than one person . . ." might improve measurement. This change seems warranted due to the considerable number of _none_ and _other_ responses elicited during re-presentation for a second percept. The directions apparently made the task too difficult.

The other related problem with the Boring Ambiguous Face was the effect of spacing or influence of other tests. A considerable difference was noted between EC and CMSC subjects in the production of _other_ percepts. The order of administration was identical for both groups; an exception in administration was made, however, since EC subjects were tested on three separate days covering a one-week period and the CMSC subjects were tested all at one time. The CMSC subjects were subjected to the SORT followed a short time later by the Boring Ambiguous Face. The SORT, which demands forming many types of percepts from the stimuli, appeared to definitely influence the Boring Ambiguous Face. The effect of these subtle administration differences made the results with the Boring Ambiguous Face of questionable validity.

Cat-Dog Test

The Cat-Dog Test might have been more discriminatory as a measure of perceptual rigidity if a different viewing duration had been used. Some alteration of the viewing time from the one second used in this study to a shorter duration might prove useful. The administration of this device was different from that used by Korchin and Basowitz (1956). In the present research the device was used as a group measure rather than an individually administered test.

Extrinsic Religious Values Scale

The Extrinsic Religious Values Scale provided a fairly reliable measure with a test-retest reliability (rank correlation) of 0.813. However, there are several problems surrounding this device which detract from its utility. The major problem with the present ERV scale is that it does not represent a unidimensional scale measuring only intrinsic-extrinsic religious values. The scale presently has an underlying assumption that the subject has some kind of religious values; disbelief may strongly influence the scale in an extrinsic direction. The scale is also influenced by the degree of acceptance or rejection of the church as an institution and also by the degree of individualism (Feagin, 1964).

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did not produce EC-CMSC group differences; and, therefore, did not support the hypothesis. The high extrinsic religious values subjects appeared different on two of the four perceptual measures when compared to low extrinsic values subjects. The WFPT produced differences on four of the 23 scales; however, not all of these scales are strongly related to the rationale of rigidity. This result provides some support for the hypothesis that perceptual rigidity would be related to extrinsic religious values. The other two measures of perceptual rigidity did not produce high-low ERV differences; and therefore, did not support the hypothesis.

4. Allport's concept regarding intrinsic-extrinsic values might be useful when extended from attitudes to the area of perception. Further investigation seems warranted.

Suggestions for Further Research

There are numerous aspects of the present research which indicate directions and needs for further research in the areas of religious orientations and values.

The present research was not conclusive regarding the relationship of perceptual rigidity and a conservative religious orientation. A continuation of research is necessary to clarify how extensively and in what ways persons with conservative religious orientation tend to show perceptual rigidity. The same need exists for extrinsic religious values and their relationship to perceptual rigidity.

After the foregoing questions have been clarified, it will be necessary to investigate useful methods of alleviating such perceptual rigidity and promoting perceptual flexibility. What specific, practical educative techniques may be used by a college, such as Evangel College, to foster greater flexibility?

A closer scrutiny through research may be warranted regarding religious conservatives who are also extrinsically valued. In this study the EC group, representing conservatism, was very intrinsically valued. Logically, it appears that a person holding religious values as strongly and tenaciously as conservatives often do for external, social-conforming reasons may border upon the pathological. The present study suggests that such people may be quite rigid.

The present study and research by Wilson (1960) and Feagin (1964) indicate a need for a more sophisticated, multidimensional religious values scale in which the dimensions are known much more precisely. The ERV scale may be too transparent and may not measure some important aspects of the intrinsic-extrinsic dimension. Perhaps some form of a correction scale, similar to the Minnesota Multiphasic Personality Inventory's *K* scale, can be developed which will equalize the belief-disbelief dimension. As indicated by Feagin (1964), the dimensions of institutionalism and individualism may also be important to account for in a new ERV scale.

The perceptual measures used in this study would probably benefit from several changes in administration. The Cat-Dog Test might be more discriminatory if a shorter viewing duration were used. The exact time would have to be determined by research. The Boring Ambiguous Face showed promise but encountered difficulties. Future use, if similar to the administration used in this study, would probably benefit from less nondirective instructions to the subject. Care should be exercised regarding the use of devices such as the SORT in conjunction with the Boring Ambiguous Face which might influence the production of *other* responses. With college students, care should be exercised to make sure that each subject has not had previous experience with the Boring Ambiguous Face, since it appears in many college introductory psychology textbooks.

In the original conceptualizing of this study, which had to be altered due to research considerations, students from a Bible college were to be compared against EC and CMSC. The investigator feels that such students would provide clearer and more significant results than those obtained in this study. Studies regarding ministry candidates and ministry personnel would provide important information. Another useful extension of the present study would be the measurement of samples representing religious conservatism other than college students. Again, such samples would probably provide clearer and more significant results. Such studies would help to give a more complete picture of such conservatism.

CHAPTER V

SUMMARY

This study was concerned with the relationships among four measures of perceptual rigidity, a measure of extrinsic religious values, and group membership representing different religious orientations.

Design and Procedure

Three basic hypotheses were subjected to empirical test in this study:

1. Measures of perceptual rigidity are related to group membership, representing different religious orientations.
2. Measures of perceptual rigidity are related to a measure of extrinsic religious values.
3. The measure of extrinsic religious values is related to group membership, representing different religious orientations.

The subjects were from Evangel College, Springfield, Missouri and from Central Missouri State College, Warrensburg, Missouri. Evangel College (EC) is a religiously conservative, denominationally-controlled college; Central Missouri State College (CMSC) is a state-controlled college. There were 127 subjects from EC, and 58 subjects from CMSC. Most of the subjects were freshmen drawn from introductory General Psychology classes at the beginning of the 1968 fall semester. The principal differences between the two groups were their attendance at a denominationally-controlled or state-controlled college, and their religious orientation. The two groups of college subjects contained more women than men; the EC group contained about twice as many women. This was due to vagaries of college scheduling and chance. The CMSC group was slightly less than half the size of the EC group; this was the largest group available at the time from CMSC. The statistical treatments used generally account for the differences in group size; since the samples were quite large, the effect of group disparity was minimized.

Four measures were used to indicate perceptual rigidity. They were: Boring's Ambiguous Face, Cat-Dog Test, Structured-Objective Rorschach Test (SORT), and the Welsh Figure Preference Test (WFPT). These four perceptual measures represent a fairly diverse cross section of the numerous perceptual devices available as measures of rigidity. Extrinsic religious values were measured by a 36-item Extrinsic Religious Values Scale (ERV).

The first hypothesis was tested by comparing the EC group with the CMSC group on four perceptual measures to determine whether group differences of rigidity existed. The second hypothesis was tested by comparing the total sample dichotomized into high and low extrinsic religious values groups, as measured by the ERV scale, on four perceptual measures to determine whether group differences of rigidity existed. The third hypothesis compared the EC group and the CMSC group on the measure of extrinsic religious values.

The statistical analysis used was primarily the nonparametric Mann-Whitney U Test. Other techniques were also used, including correlation and analysis of variance. A level of significance of .05 was used.

Results and Conclusions

The first hypothesis concerning the relationship of measures of perceptual rigidity and group membership representing different religious orientations was neither proved nor disproved. Three of the four perceptual measures did not provide significant support for the hypothesis. The measure supporting the hypothesis was the SORT; four of the 15 SORT variables gave significant differences between the EC-CMSC subjects. The EC group used more form-dominated determinants and fewer color and shading determinants on the SORT than did the CMSC group.

The second hypothesis concerning the relationship of measures of perceptual rigidity and a measure of extrinsic religious values was neither proved nor disproved. Two of the four perceptual measures did not provide significant support for the hypothesis. The measures supporting the hypothesis were the Boring Ambiguous Face and the Welsh Figure Preference Test. Longer elapsed times for percept re-formation on the Boring Ambiguous Face were found for the high extrinsic religious values group when compared against the low extrinsic group. The high extrinsic group also chose more simple, symmetrical figures on the WFPT than did the low extrinsic group. Four of the WFPT's 23 scales produced significant differences. Only about half of these scales, however, closely fit the rationale for rigidity.

The third hypothesis concerning the relationship of a measure of extrinsic religious values and group membership representing different religious orientations produced highly significant differences. The EC group was low on the measure of extrinsic religious values; therefore, they clearly held intrinsic religious values.

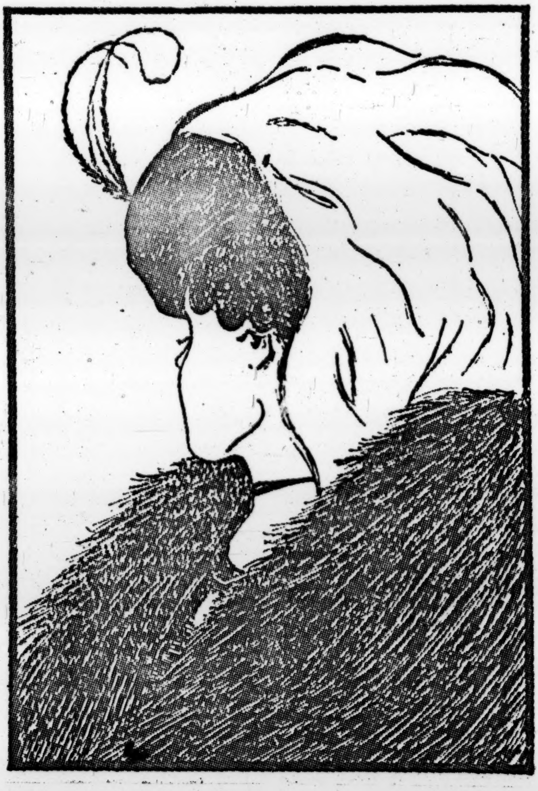
The principal conclusion which may be made from the results of this study concerns the intrinsic-extrinsic religious values dimension and the strong difference such a dimension elicited between students in attendance at a denominationally-controlled college and at a state-controlled college. The students at Evangel College, who are from a religiously conservative denomination and attend a religiously conservative, denominationally-controlled college, had a very strong intrinsic religious value orientation when compared to the Central Missouri State College group. The Evangel College students apparently hold religious values for their internal, personal worth rather than for conforming, social reasons. There were no differences for men and women on the ERV scale. Apparently, although sex differences may influence areas of religious susceptibility and expression regarding extrinsic religious values, the religious orientation affects both sexes equally.

The results for the two hypotheses concerning the relationship of perceptual rigidity to aspects of religion were equivocal. Further research will be necessary to clarify these relationships. Students in attendance at a religiously conservative college appeared perceptually rigid on some of the SORT variables. Ample reason for such rigidity might be found in the concept of a fear-invoking Deity, strong and rigid conduct controls, and other restrictive practices typical of religious conservatism. However, on three other measures they did not appear significantly different than state college students. Students who were high on a measure of extrinsic religious values gave some evidence of perceptual rigidity on two of the four perceptual measures. Allport's concept of extrinsic religious values may have some utility when extended from attitudes to the area of perception.

It is clear that further research is necessary regarding religious conservatives of varied age, social class, and locale to determine the generality of the effect of such a religious orientation. The same extension of research is necessary for the concept of extrinsic religious values.

APPENDIX A

BORING AMBIGUOUS FACE



Boring, E. A new ambiguous figure. American Journal of Psychology, 1930, 42, 444-445.

Boring Ambiguous Face Examiner's Data Form

Percept Formed				Time
mother-in-law	wife	other	none	
I				sec.
II				sec.

NAME SEX M F

Directions to Examiner: Please check which percept is formed and enter the time for the first and second percepts. Remember that 180" should be entered for no percept; if a percept other than a person, or face, is formed, record the time of such a percept; however, continue timing until percept if a person is formed or 180" has elapsed.

1. Opening statement:

   I am going to show you a picture which can be seen in different ways. Tell me, what do you see? Please tell me when you have it.

2. Present picture and time with stopwatch.

3. Inquiry: It is necessary to determine which percept is seen without indicating or providing information which may be used by the subject to form a second percept. Determine which percept is seen; be sure not to indicate, but be very nondirective and let the subject tell you.

4. Re-presentation:

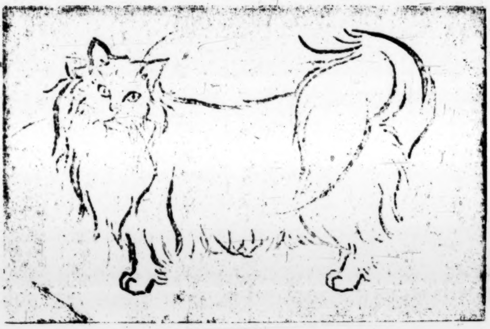
   Some people see more than one image in the picture, can you?

   (Re-time with stopwatch)

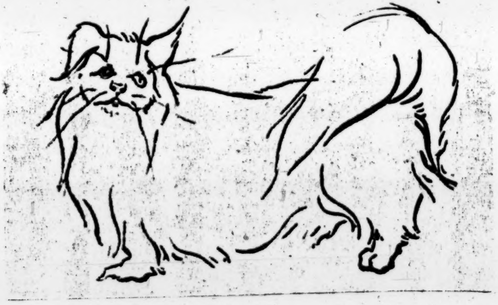
5. Be sure you have name, sex, percepts formed, and both times.

APPENDIX B

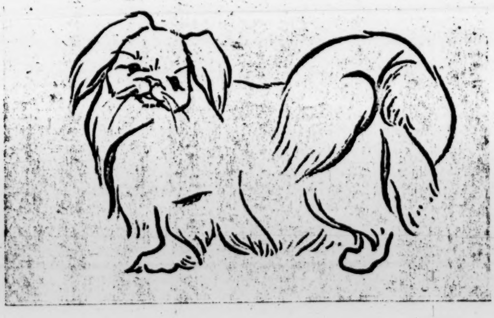
CAT-DOG TEST



Slide number 1



Slide number 7



Slide number 13

copied from original drawings by I. Krasno

Name ______________________________
Last First

Directions:

You will be shown some pictures that can be either a dog or a cat. There are no right or wrong answers. Before each picture is shown on the screen, the tester will say the word "ready." Keep your eyes on the screen at all times since the picture will only appear for a second. Decide whether each picture is more like a cat or more like a dog. Please circle the appropriate answer.

1. cat dog
2. cat dog
3. cat dog
4. cat dog
5. cat dog
6. cat dog
7. cat dog
8. cat dog
9. cat dog
10. cat dog
11. cat dog
12. cat dog
13. cat dog

APPENDIX C

EXTRINSIC RELIGIOUS VALUES SCALE[1]

Part I

Below are some statements about religion. Each has two possible endings. Will you please read each of these statements and mark an X beside the ending which best fits your feelings about the statement. It may be hard to decide which ending to choose; but please mark only one ending for each statement, selecting the one that you most nearly agree with. There are no "right" or "wrong" choices and there will be many religious people who will select each possible ending to the statements.

1. When saying the Lord's Prayer in unison at church my mind is more likely to be on
   ___ the fact that many of us are saying the same prayer
   ___ the meaning of the prayer for me personally.

2. Religion helps to keep my life balanced and steady in much the same way as my citizenship, friendships and other memberships do.
   ___ I agree
   ___ I disagree.

3. A person who does not belong to some church must at heart feel very insecure.
   ___ I think this is almost certainly a true statement.
   ___ I think this statement is not necessarily true.

4. The principal reason I am a member of the church is that it gives me a deep feeling of security in this troubled world.
   ___ Yes, this is true.
   ___ No, I do not agree.

5. Without the church mankind would have no concepts of right and wrong.
   ___ I agree
   ___ I disagree.

---

[1] The title did not appear on the test booklet.

6. While the church serves me in a good many ways, on the whole it seems especially important to me personally because:
___ it gives me an opportunity to find myself and express my aspirations
___ it teaches, guides and protects me.

7. The religious concept of "Brotherhood of Man" probably refers to:
___ a unity of all people regardless of who they are or what they believe
___ a unity of believers in the faith

8. One reason for my being a church member is that such a membership helps to establish a person firmly in the community.
___ Yes, this is one reason.
___ This reason does not apply to me.

9. Prayer is, above all else, a means of obtaining needed benefits, protection and safety in a dangerous world.
___ On the whole, I agree.
___ On the whole, I disagree.

10. Some people say that they can be genuinely religious without being a member of any church.
___ Yes, I agree that they can.
___ I do not believe this.

11. When I enter a cathedral or large beautiful church I am more likely to feel:
___ respect for the majesty and greatness it represents.
___ some other personal religious emotions of my own.

12. Imagine yourself in the two following situations. In which would you feel your religious life to be most strengthened?
___ As a member of a small struggling church.
___ As a member of a big and influential church.

13. In one respect my church is like a lodge or fraternity: I feel more comfortable and congenial with fellow-members than I do with non-members.
___ Yes, I agree with this statement.
___ No, I cannot agree with it.

14. When visiting friends in another city who never go to church, I would nonetheless make a definite effort myself to attend church on Sunday.
___ Probably yes.
___ Probably no.

15. If I were to join a church group I would prefer to join:
___ a Bible study group
___ a social fellowship

Part II

Below are some statements about religion. Each has four possible degrees of agreement and disagreement. If you strongly agree, mark an X in the space under "SA". If you agree, mark an X in the space under "A". If you disagree, mark an X in the space under "D". If you strongly disagree mark an X in the space under "SD". There are no right or wrong answers. What is wanted is your own individual feelings about the statements.

1. What religion offers most is comfort when sorrow and misfortune strike.
SA A D SD
___ ___ ___ ___

2. I try hard to carry my religion over into all my other dealings in life.
SA A D SD
___ ___ ___ ___

3. Religion helps to keep my life balanced and steady in exactly the same way as my citizenship, friendships, and other memberships do.
SA A D SD
___ ___ ___ ___

4. One reason for my being a church member is that such membership helps to establish a person in the community.
SA A D SD
___ ___ ___ ___

5. The purpose of prayer is to secure a happy and peaceful life.
SA A D SD
___ ___ ___ ___

6. It doesn't matter so much what I believe as long as I lead a moral life.

SA	A	D	SD
___	___	___	___

7. Quite often I have been keenly aware of the presence of God or of the Divine Being.

SA	A	D	SD
___	___	___	___

8. My religious beliefs are what really lie behind my whole approach to life.

SA	A	D	SD
___	___	___	___

9. The prayers I say when I am alone carry as much meaning and personal emotion as those said by me during services.

SA	A	D	SD
___	___	___	___

10. Although I am a religious person, I refuse to let religious considerations influence my everyday affairs.

SA	A	D	SD
___	___	___	___

11. The Church is most important as a place to formulate good social relationships.

SA	A	D	SD
___	___	___	___

12. Although I believe in my religion, I feel there are many more important things in life.

SA	A	D	SD
___	___	___	___

13. If not prevented by unavoidable circumstances; I attend Church at least:

___ once a week or oftener
___ two or three times a month
___ once every month or two
___ rarely

14. I pray chiefly because I have been taught to pray.

SA	A	D	SD
___	___	___	___

15. Religion is especially important to me because it answers many questions about the meaning of life.

SA A D SD

___ ___ ___ ___

16. A primary reason for my interest in religion is that my church is a congenial social activity.

SA A D SD

___ ___ ___ ___

17. I read literature about my faith (or church):

___ Frequently
___ occasionally
___ rarely
___ never

18. Occasionally I find it necessary to compromise my religious beliefs in order to protect my social and eonomic well-being.

SA A D SD

___ ___ ___ ___

19. It is important to me to spend periods of time in private religious thought and meditation.

SA A D SD

___ ___ ___ ___

20. The primary purpose of prayer is to gain relief and protection.

SA A D SD

___ ___ ___ ___

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